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AT THE SCHOOL IN GREAT WINDMILL STREET.

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> Et quoniam variant morbi, variabimus artes;
> Mille mali species, mille salutis erunt.

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For many fortunate discoveries in medicine, and for the detection of numerous errors, the world is indebted to the rapid circulation of Monthly Journals; and there never existed any work, to which the Faculty, in Europe and America, were under deeper obligations, than to the Medical and Physical Journal of London, now forming a long, but an invaluable, series.—RUSH.

ORIGINAL PAPERS,
AND
CASES OBTAINED FROM PUBLIC INSTITUTIONS AND OTHER AUTHENTIC SOURCES.

CELLULAR INFLAMMATION.

Observations on diffused Cellular Inflammation, with Cases. Being the Substance of a Clinical Lecture delivered by HENRY EARLE, F.R.S. &c. (ST. BARTHOLOMEW'S HOSPITAL.)

UNDER the title of diffused cellular inflammation, I wish to consider those cases which have been classed under the general names of phlegmonous and traumatic Erysipelas. Names are of but little importance, provided the ideas we attach to them be distinct, and not likely to be confounded. It is on this account that the accurate definition of a disease is essential, for an incorrect one will give rise to wrong ideas, which will infallibly lead to erroneous practice. I object to the term phlegmonous erysipelas, because I think that it is likely to be confused with common acute erysipelas, and because I consider erysipelas essentially as an affection of the skin; whereas the disease under consideration exerts its influence principally on the subcutaneous tissue and fascia. It is true that this is accompanied with an erysipelatous redness of the skin, but this is rather to be considered as an effect of the changes which are taking place in the subcutaneous cellular tissue, than as the original primary affection. This distinction may not at first sight appear very important, but in a practical point of view it will be found of the greatest consequence.

During the last few months, several cases of this affection have occurred at St. Bartholomew's Hospital, in most of which the practice recommended by Mr. COPLAND HUTCHISON has been successfully employed. There are at the present time two cases in a convalescent state, which bear testimony in favour of this method of treatment. Before proceeding to relate these cases, it will be well to consider the peculiar characteristic symptoms which mark this affection, and offer some observations on the nature of the treatment, and the objects proposed to be attained by it.

I have stated that the seat of this disease is in the subcutaneous cellular tissue: it consists in a rapidly diffused acute inflammation in this tissue, to which no bounds are set, and which, if not arrested quickly, terminates in most extensive suppuration and sloughing of the cellular substance and fascia, which relieves itself, if the patient survives, by large and uncontrollable sloughing of the integuments.

I have known, in the short space of thirty-six hours, the whole integument of an upper or a lower extremity involved in one extensive sloughing abscess. This affection most frequently takes place in the extremities: in Mr. C. Hutchison's cases, it almost constantly occurred in the lower extremities, and was often produced by the irritation caused by the friction of coarse trowsers, wetted with sea water, on old indolent ulcers. I have more frequently met with it in the upper extremity. It has generally followed punctured wounds or severe bruises upon the elbow, and lacerations of the integuments of the hands or fingers. In several instances I have known it occur after punctured wounds of joints, or in the neighbourhood of joints, which have been attempted to be closed. In the majority of cases, it is accompanied in the early stages with well-defined inflammation of the absorbents; but these soon become so involved in the general tumefaction of the limb, that they cannot be traced. This swelling takes place with great rapidity and to great extent, accompanied with a dusky red appearance of the surface. In the earlier stages, there is a peculiar elastic feel in the integuments, which afford much greater resistance than in common œdema. If the integuments be divided at this period of the affection, the fat and cellular substance cuts with great crispness, and the wound gapes much. After a time, the sensation imparted to the touch is somewhat analogous to the crepitation of emphysema: it has a peculiar boggy feel; and now we find, on cutting down, that the work of destruction has taken place.

The constitution participates much with the local affection. The secretions are either all suspended or deranged. The circulation is much hurried; the pulse hard, contracted, and frequent, and after a time irregular. The nervous system is greatly disturbed; the countenance becomes most anxious, and features contracted. There is great and constant vigilance; or, if the patient drops asleep, he awakes in alarm, or in a state of delirium. When the cellular membrane has extensively sloughed, the greatest prostration of strength accompanies it, and a state resembling the worst form of irritative sympathetic fever often closes the scene.

The treatment best suited to this formidable affection, (which, if adopted in time, seldom fails to arrest its progress,) is the one which has been recommended by Mr. Copland Hutchison, in a paper published in the Medico-Chirurgical Transactions; to the real merits of which I can bear most ample and satisfactory testimony. This treatment consists in making very free longitudinal incisions, if possible before suppuration has taken place, through the swollen inflamed integuments down to the fascia or muscles. The vessels of the skin should be allowed to bleed freely, and even encouraged by warm fomentations; the limb should then be enveloped in a warm bread-and-water poultice. A large dose of calomel, antimony, and opium, should be administered; and after some hours the patient should be freely purged with senna and salts, or some other active aperient. If the incisions be made sufficiently large and deep, the relief is very speedy, and it is seldom requisite to repeat them. In a few hours I have witnessed the subsidence of tension and pain, the nervous system tranquillised, and the secretions restored.

Objections have been raised against this practice, on the ground of the impropriety of inflicting fresh injury on parts already inflamed. This certainly appears very specious; but facts are obstinate, and many, which are well authenticated, can be produced to prove the fallacy of the arguments and the efficacy of the practice. Again, it has been contended that this mode of treatment was rude, and not adapted to civil life. To me this argument appears so puerile as hardly to merit a reply. If by bold and decided measures we can arrest the progress of a most formidable and rapidly destructive disease, surely it is our duty to employ them for the benefit of all alike:—disease makes no such distinctions of rank, and why should the surgeon?

If any additional reason were required in support of this practice, besides the rapid and almost certain relief which it affords, we shall, I think, at once be reconciled to it, when we consider that by these very incisions we are most probably preserving the integuments from sloughing, and rendering it unnecessary to make far more extended wounds, which we should otherwise be compelled to have recourse to, after allowing the disease to run its course. And further, in making these incisions at an early period of the complaint, we are enabled to select those parts for dividing the integuments where there is least hazard of wounding any vessels or nerves of importance. The incisions should be made from three to six inches in length, in the long axis of the limb, which will best remove the distressing tension.

The rationale of this treatment appears to be the relief afforded to the immediate seat of the disease, which consists in a state of acute inflammation of the cellular membrane, a part endued with low powers of vitality.*

I am well aware of the heavy responsibility which a surgeon incurs in adopting, in the early stage, this bold and apparently severe treatment, before the necessity for it may be obvious to the patient or his friends; but this is a responsibility which must often attach to medical men in the performance of their duty, and it is one which no man competent to the exercise of his profession should ever shrink from. Let the surgeon first qualify himself for the performance of his painfully anxious vocation, by patient and laborious investigation of original facts, and then let him discharge his duty fearlessly, and to the best of his abilities. I should be very sorry to be misunderstood, or to mislead others. Let it not be supposed that I am an advocate for making incisions in every case of erysipelas attended with swelling of the limb. Certainly not. But, in this particular form of cellular inflammation, I feel perfectly satisfied that the practice recommended is beneficial, and is indeed the only method of treatment which is capable of arresting the progress of the disease.

This conviction rests principally on the evidence of cases which have occurred at St. Bartholomew's Hospital, several of which are of very recent date. Before proceeding to detail some of these facts, I will add one more remark. As the treatment recommended in these cases is bold and severe, it is of the utmost importance to discriminate accurately between this peculiar affection and the more common forms of erysipelas. To obtain this knowledge, we must make observations at the bedside of the patient: no verbal description, however correct, can convey that impression which "the faithful eye" and touch will alone impart. The disease, once fully recognised, cannot easily be mistaken.

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* We often have opportunities of witnessing the comparative vitality of the skin and subcutaneous tissue, not only in this disease, but in herpetic ulcers and other complaints, where this structure perishes much more extensively than the superincumbent skin.

I subjoin some cases which have lately occurred, and which have been drawn up by the gentlemen who conducted the treatment under my superintendence.

CASE I.—*Cellular Inflammation of Hand and Arm, from the Bite of a Dog.*

John Wilson, ætatis thirty-four, of a strong constitution and a free liver, was admitted into Harley's Ward, on the 18th of June, 1826, with an inflamed hand from the bite of a dog. As there was no reason to believe the dog was mad, it was treated as common phlegmonous inflammation.

The pulse being full and strong, ninety-six, with great pain in the hand and increased heat, sixteen ounces of blood were taken from the arm, and twenty leeches applied to the back of the hand. He was ordered to take a dose of calomel and jalap immediately, and saline medicines every four hours; and to apply a bread-and-water poultice to the hand.

June 19th.—The hand, though much improved, is still greatly inflamed, but not much pain in it. Twenty leeches were applied to the hand; to continue with the medicine as before.

From this time till July 2d, an interval of thirteen days, the hand gradually improved. He then, without being able to account for the change, complained of a pain in his head and sickness: he had a good deal of fever; the hand and forearm were swollen and inflamed. He was ordered an emetic; eighteen leeches were applied to the hand and arm; he was bled to sixteen ounces, and was ordered a saline mixture with antimony, to take every four hours.

July 3d.—Hand better and pain diminished, but the inflammation of the forearm continues, and has run up the absorbents nearly to the axilla. On examining the back of the hand attentively, a slight fluctuation was felt. Pulse 100, full and strong. An incision was made, about two inches and a half in length, on the back of the hand, which gave vent to a quantity of matter that had been secreted beneath the fascia. He was bled to twelve ounces, and twenty leeches were applied to the arm.

At nine P.M. he had no pain in the hand, but complained more of the arm. Pulse ninety-six, full and strong. Ten ounces of blood were taken away, and twenty leeches applied to the arm.

4th.—Both hand and arm much improved.

5th.—The forearm is more inflamed and more swollen to-day. He was ordered some calomel and jalap, and fourteen leeches to be applied to the forearm. Absorbents inflamed to the axilla.

6th.—The forearm more swollen than it was yesterday; pulse 100, full and strong; tongue furred. An incision was made, about five inches in length, from the olecranon towards the hand, not with the expectation of finding matter, but to give relief to the extreme tension which was present. The wound bled about half a pint. Twenty leeches were applied to the front of the arm.

The following day, the arm was very much improved in every respect, and continued so till the 10th, when he had an attack of fever, caused by using too much exertion in endeavouring to get out of bed, which gave rise to a fresh attack of inflammation in the arm. His pulse being full and strong, ninety-eight, with a hot dry skin, he was bled to twenty ounces; and half a scruple of Potass Nitras added to each dose of his mixture. After this he daily improved; and, on the 18th, he was ordered the Unguent. Zinci, to be applied to the hand and arm. He was now put on meat diet, and remained in the hospital till August the 1st, when he was discharged cured.

In this case there was an unusual degree of inflammatory action, the pulse remaining strong and full after very active depletion. The incision afforded great relief, but, in consequence of the wound not bleeding freely, it was necessary to apply more leeches. The incision, I have no doubt, prevented extensive suppuration. The wound healed very readily.

CASE II. *Cellular Inflammation of the Leg.*

Joseph Potter, ætatis twenty-six, of a strong constitution, and rather a free liver, was admitted, August 10th, into Colston's Ward, with an ulcer in his leg. A poultice was applied, and for a few days it seemed inclined to heal. On the 28th, he had an attack of fever, accompanied by all the usual symptoms in an excessive degree. The ulcer was much inflamed and very painful. He was bled to twenty ounces, and ordered saline medicines to take every three hours. The following morning, the fever had much abated, but the ulcer and inflammation of the leg were the same.

August 29th.—The fever had returned with increased violence; the leg was much swollen, and the inflammation increased. Sixteen ounces of blood were taken from the arm. To continue with the medicines as before.

31st.—The fever had somewhat abated, but the inflammation had greatly increased, extending up the absorbents: the leg was much swollen, extreme tension was present, and the pain most violent. An incision, from four to five inches in length, was made on the posterior part, through the fat and cellular tissue, down to the fascia. A small artery was divided; and the wound bled to about half a pint. The relief afforded was so great, that five minutes afterwards he complained of little or no pain, except from the smarting of the incision. He was ordered a cathartic, a bread poultice to the leg, and an evaporating lotion to the thigh. At nine P.M. he was free from pain, and the leg looked better.

September 1st.—Had slept well the fore part of the night, but towards morning became very restless, and complained of a slight pain in the head. The leg was greatly improved, the wound looked well, and the inflammation had left the absorbents. He was ordered some Ol. Ricini. At seven P.M. the pain in the head had increased; pulse full and frequent, skin hot. Twenty ounces of blood were drawn from the arm; to continue with the medicines as before.

Sept. 2d.—Had passed a good night; was in no pain, the leg much improved, and the wound discharged a healthy pus. From this time it improved daily, as also did his general health.

On the 6th, his foot and ankle were swollen and inflamed. Twelve leeches were applied, and a bread poultice afterwards. It was better on the following day. On the 9th, twelve more leeches were applied, and in two or three days it was quite well.

On the 15th, he was put on a better diet; the leg was bandaged; and on the 8th instant he was discharged cured,

This case speaks so strongly for itself, that it hardly requires a comment. It is to be remarked that, in both the cases above related, the inflammation of the absorbents readily subsided after the incisions.

CASE III. *Cellular Inflammation following Venesection.*

James Bannister, ætatis thirty-six, was admitted into Pitcairn's Ward, August 6th. He stated that, four days previously, he had been bled for a pleurisy. Two days after, pain and tumefaction of the arm took place, preceded by severe rigors. When admitted, the arm presented a very inflamed swollen appearance, the tumefaction extending nearly to the shoulder, with inflammation of the absorbents to the axilla, and an erysipelatous blush spreading over the chest. He was suffering under a high state of irritative fever, with headache and a much loaded tongue. Calomel and tartar emetic were ordered for him, with saline aperients, and tepid poppy fomentations to the arm.

On the following day, the tension of the arm having increased, and the constitutional symptoms not at all abated, very free incisions were made on the forearm and arm. Suppuration and sloughing of the cellular membrane had taken place near the wounded vein. The wound in the upper arm bled freely. In the evening, he was much relieved. All inflammatory symptoms rapidly subsided. Extensive sloughs of the fascia were drawn away from the forearm; after which the wounds granulated, and healed readily under the use of Sulphate of Quinine, and occasional doses of Extr. Colocynth. Comp. and Calomel.

In this case the incisions were not made sufficiently early to prevent the destruction of the fascia and cellular membrane in front of the forearm, but the immediate stop which they put to the progress of this affection in the upper arm was well marked.

CASE IV. *Cellular Inflammation of the Hand and Arm, following a Wound of the Forefinger.*

James Hailes, ætatis twenty, a chair and sofa maker, was admitted into Colston's Ward, Saturday, October 21. He had struck his forefinger against a man's tooth on the previous Saturday. He had been a free liver, and was rather intoxicated at the time of the accident. The wound rapidly inflamed, and was very painful. The hand had been fomented and poulticed, and he had taken saline aperients previously to his admission. Diffused cellular inflammation took place up the arm, and the hand became greatly swollen. When admitted, there was a large sloughy abscess at the back of the hand, which was freely opened by the gentleman who attended him; who also made a small puncture on the arm, which bled freely. The integuments, to some extent, were gangrenous at the back of the hand.

I saw the patient a few hours after his admission, and found him with a most anxious countenance and hard contracted pulse, with dark fur on his tongue, and great prostration of strength. The absorbents of the upper arm were inflamed to the axilla; the integuments of the forearm were of a dusky red colour, and imparted a boggy feel when pressed. The tension appeared in some degree to have subsided, which is the case when suppuration has taken place. I immediately made a very free incision through the integuments along the edge of the ulna, to the extent of five inches. The cellular membrane was sloughy, and some pus escaped. The wound bled very freely, and he lost about thirty ounces of blood in a short time. He was rather faint, but felt much relieved in the space of a few hours. Calomel, antimony, and opium, were given to him at night.

The following morning, all appearance of inflammation of the absorbents had subsided; the skin of the forearm was cool, and all pain had ceased. From this time he experienced no bad symptoms, and the patient is now convalescent.

I come now to speak of a case which is peculiarly interesting to surgeons, and more especially to those who are engaged in anatomical pursuits. It is the only instance in which I have employed this treatment to diffuse cellular inflammation arising in consequence of a morbid poison. It occurred to one of my dressers, who in part drew up the following particulars.

CASE V. *Cellular Inflammation of the Hand and Arm, following a Wound received in Dissection.*

Mr. C. E. B—, ætatis twenty-two, of sanguine temperament and a free liver, on the 21st of April, in opening the cranium of a man who died of gangrenous erysipelas after injury to the head, pricked the middle finger of his right hand with a small spicula of bone: the wound was so small that it did not bleed. On going to bed, after entertaining some friends at dinner, and taking his share of the wine, his hand became afflicted with pain, which rapidly increased, with an intense burning sensation in the finger. He applied cold water, but, finding no relief, he had recourse to a bread-and-water poultice; notwithstanding which, he could obtain no sleep. On the following morning, eight leeches were applied, and a deep incision was made near the seat of the injury, but without any benefit: the inflammation continued to spread over the hand.

I saw him about the middle of the day, at which time the first phalanx of the finger had perished. Distinct lines of inflamed absorbents could be traced up the arm, especially at its outer surface, but no tenderness or pain was felt any where except in the finger and hand, and there it was of the most intense and burning nature. Leeches were again applied, and the poultice repeated; his bowels were freely moved with calomel and tartar emetic, and senna and salts mixture. The pain in the hand continued unabated, and could only be tolerated by applying the coldest water.

On the morning of the 23d, after a sleepless night, the hand and arm had a puffy œdematous appearance, although the redness of the absorbents was diminished. The tongue was furred, and pulse hard and frequent; skin hot and parched, and countenance much distressed. Sixteen ounces of blood were taken from the arm, and cold constantly applied to the hand. Opii gr. ij. Pulv. Antim. gr. iv. were given at night.

24th.—He had passed a restless night, with constant state of vigilance. The arm was more swelled, and extremely painful; pulse 120, but softer. Opium was given in three-grain doses during the paroxysms of pain.

25th.—The night had again passed without sleep, and at intervals there was delirium. The arm was more puffy, but the pain was rather diminished. Oleum Ricini was given to obviate costiveness, and the opium continued. The following night passed tranquilly, but without sleep.

On the 26th, the arm was again very painful, and much swollen. It was enveloped in a bread poultice, made with a strong watery solution of opium. His bowels were open; his pulse frequent, but not strong; tongue covered with much brown fur; and he was more disposed to delirium, with a most anxious sunken countenance. Thirty drops of Guttæ Nigræ were given at night, in addition to the former pills of opium.

On the 27th, there was no very sensible change. Still no sleep at night.

On the 28th, he was visibly much worse. The inflammation had extended to the deltoid muscle on the outer side, but did not appear to have reached the axilla on the inner side; nor was there any pain at this part, or disposition to extend over the pectoral muscle. From the insertion of the deltoid downwards, the whole arm was as tense as possible, and felt remarkably firm when pressed. The colour was a dusky red, rather more vivid at the upper margin. He had been delirious all night, and appeared rather comatose. His countenance was shrunken, wild, and ghastly. He was so weak that he could not sit up in bed; his pulse was irregular, feeble, and fluttering; his tongue covered with thick brown fur. It was evident that he could not long survive under these circumstances, and, although I had no evidence in favour of the practice in a similar case, I resolved to make large and deep incisions, provided it met with Mr. LAWRENCE's concurrence, who was so obliging as to visit him with me. Mr. L. entertained the same view of the case, and in his presence I made three deep incisions,—one commencing a little above the insertion of the deltoid, and more to the outer side, which extended down to the olecranon; a second, about six inches long, from just below the olecranon to the wrist; and a third, about three inches in extent, on the inner side of the forearm. No suppuration or sloughing was apparent, but the wounds gaped much, and the fat was very firm and granular. The wound at the outer side of the forearm bled very freely, to the extent of from thirty to forty ounces; after which the limb was enveloped in a large bread-and-water poultice. In the evening, when I saw him, his countenance was much improved; and his pulse was steady, soft, and full, about eighty beats in the minute. The pain had nearly subsided, except in his finger. He was ordered a dose of calomel and jalap, and to continue the opium after its operation.

29th.—He had passed the night tranquilly, but without sleep. His countenance was much improved, and comparatively cheerful; pulse stronger, and quite soft; arm quite easy; skin flaccid and pale.

30th.—He was nearly the same as yesterday; still no tranquil sleep could be obtained. In the evening there was great restlessness, with slight wandering. Two grains of opium and six of camphor were given to him at night, which, for the first time since the receipt of the injury, procured repose. He slept tranquilly for four hours, and awoke perfectly collected, and with the arm quite easy. When I paid my visit, I found him greatly improved in every respect. Suppuration had taken place at the wounds. His bowels were moved with Infus. Sennæ and Tinct. Jalapæ; and, after the operation of the medicine, he took solid food with much relish. The opium and camphor were repeated at night.

From this time he continued to go on most favourably: very copious healthy suppuration came readily away from beneath the whole integuments of the upper and fore arm; but no sloughing took place of the cellular membrane or fascia. By lighter dressing and bandaging, the whole rapidly filled up and skinned over. In a few days he was ordered the Sulphate of Quina in Infus. Rosæ, and was allowed to take a mutton-chop and some claret.

Nothing particular occurred during the subsequent treatment, except the formation of abscesses at the back and front part of the hand, which required to be freely opened: during the formation of these, the constitution again suffered some excitement. The extremity of the wounded finger was also very painful, until the lateral ligaments were divided, and the dead portion removed. The finger remained swollen for a considerable time, and was the last part to heal. He subsequently went out of town, when he rapidly regained his health and strength.

I consider this case as particularly valuable, as it is the first instance, as far as I am aware, of the application of the practice to this form of disease. The rapidly destructive consequences which occasionally follow the most trifling wounds received in dissection, and particularly in the examination of recent bodies, are well known to the profession. Many most interesting and melancholy details of the premature death, after severe suffering, of some of the brightest ornaments of our profession, have been recorded in medical works, and especially in the able Treatise of Mr. TRAVERS on Constitutional Irritation. The present case differs in many respects from most of those recorded, and more nearly resembles that form of diffused cellular inflammation which I have endeavoured to explain.

That nothing short of the severe measures which were adopted would have saved the life of this young gentleman, I believe every person who witnessed the case was perfectly convinced. Should a similar case ever again fall under my observation, I would certainly not hesitate so long before adopting this practice, as I firmly believe that the extensive suppuration might have been prevented, and the sufferings of the patient greatly curtailed, by its more prompt employment.

Since the lecture on the above subject was delivered, another striking example has occurred, the subject of which is at present in St. Bartholomew's Hospital.

CASE VI. *Cellular Inflammation following Fracture of the Tibia.*

Richard Titcomb, ætatis thirty-five, was admitted November 10th, with comminuted fracture of the lower part of the tibia, and superficial laceration of the integuments in front of the leg above the fracture. The injury had been inflicted by the falling of a puncheon of rum. He was intoxicated at the time of his admission, and it appeared that he was much in the habit of drinking raw spirits. The fracture was reduced, and the limb placed on the side.

The case went on tolerably well for some days. On the 13th, the fractured bone appeared displaced by the action of the muscles, and I advised its being placed on the heel in a fracture-box.

On removing the splints, the wound looked sloughy, and the limb was much swelled and inflamed.

On the 14th, the inflammation had extended to the knee. He had passed a restless night, and he had considerable fever. Calomel and Antimony, and Haust. Sennæ Comp. were ordered, and a bread-and-water poultice applied.

On the 15th and 16th, I did not see the patient, but find, from the daily report which was kept by Mr. Watson, that no material change took place until the night of the 16th, when all his symptoms became much aggravated. When I visited him on the 17th, I found that he had been delirious in the night, and had again displaced the fracture. The whole limb was immensely swollen; the superficial wound of the skin was sloughy; there was obscure fluctuation on the inner side of the tibia above the fracture, and a boggy feel around it; the absorbents were inflamed up to the groin, and a dusky inflammation extended beyond the knee; his countenance was flushed; tongue parched; pulse ninety-six, and rather feeble. I made a free incision on the inner side of the tibia, and gave exit to some matter, and exposed the sloughy cellular membrane. A further incision was made, about four inches long, on the outer side of the leg, which was very tense and inflamed, but no suppuration had yet taken place at this part. The wounds bled about eight or ten ounces. He was ordered calomel and jalap to open the bowels, and opium at night.

On the 18th, I found that he had passed another bad night. The pain in the leg was diminished, and the appearance of the integuments around the second incision was much improved, being pale and comparatively loose. The integuments in front of the tibia had sloughed to some extent, and the sloughy fascia was very apparent through the first incision. As the tension and inflammation of the inner side of the leg had not been sufficiently relieved by this incision, another was made below it, to the extent of four inches; in making which, a superficial vein was divided, which bled very profusely. To maintain the limb in the best position, and prevent the necessity for any motion, he was placed on one of my double inclined beds, and the foot fixed to a footboard.

The following day, (the 19th,) I found him greatly improved: he had passed a good night; the inflammation of the absorbents had disappeared, and the limb was only labouring under the effects of the previous mischief. Copious suppuration and extensive sloughs were the consequence of this; but the latter have all separated, leaving a healthy granulating surface, and the former is gradually diminishing under mild astringent dressing and bandages.

It has since been necessary to make some minor incisions on the instep and above the ankle; but the case, on the whole, is making very satisfactory progress.

Dec. 11th.—Soon after the above report was drawn up, the patient's health suffered materially; the granulations over the front part of the leg became glossy and smooth; and it was evident that the wound communicated with the comminuted fracture, and that no attempt at union had taken place. The integuments over the ankle and foot were quite hollow, and discharged a thin sanies at the openings which had been made. From the situation of the fracture, it was very probable that the fracture extended into the ankle-joint. Under these circumstances amputation of the leg was deemed adviseable, from a fear that the patient's constitution would sink under the continued drain and irritation.

The operation was performed on Saturday, the 9th of December, and was more tedious than usual, in consequence of the very firm adhesions which had taken place between the cellular membrane and fascia, and from the longitudinal incisions having extended nearly as high as the knee, both at the inner and outer side of the leg. Being very desirous of preserving the knee-joint, I carefully dissected up the integuments, after making a circular incision, and, by removing the spine of the tibia, in the manner recommended by ASSALINI, there was sufficient skin to cover the bones and meet together in a horizontal line. The appearance is not so neat as the more perpendicular stump, but, as far as I can at present judge, the case is likely to terminate well.

In this case, I think, if earlier and freer incisions had been made, when the inflammation of the absorbents and tension first supervened, much mischief might have been prevented.—In addition, I beg to observe, that in no one instance have I ever had occasion to regret making early incisions, although in several, as in this last case, I have conceived that delay has been productive of more serious consequences, and have induced the necessity for more severe measures in the sequel.

Although it has been necessary to remove the limb in this case, in consequence of the extent of the injury and the state of the patient's constitution, I do not consider that this at all militates against the practice of free incisions in cellular inflammation: on the contrary, it is a strong additional fact in support of it, as the patient was fast sinking under the disease when the incisions were made, and, but for the practice which was adopted, would never have survived to undergo amputation; as, of course, such an operation was quite inadmissible in the state in which I have described him to have been. I believe that every person who witnessed this case was satisfied that the man's life was preserved by the free incisions, and that he was brought into a state favourable for operation by their timely employment.*

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* See a note from Mr. Earle in our Intelligence: it was received too late to embody it in the paper.—ED.

I am happy in having it in my power to subjoin a case, with the particulars of which I have been favoured by Mr. Warry, house-surgeon to St. Bartholomew's. The bold treatment which was employed I have no doubt preserved the patient's life; and, had it been adopted at an earlier stage to less extent, it would probably have arrested the progress of the mischief, and greatly reduced the severity of the subsequent treatment. It is interesting however, in showing how rapidly amendment will follow these free incisions, and with what perfect impunity they may be employed. In no one instance have I known the cut edges ulcerate or slough, except where the subjacent cellular membrane had extensively perished, and the integuments were in a state approaching to gangrene at the time of making the incision.

VII. *Case of Cellular Inflammation, in which an Incision was made, which extended from an inch below the great Trochanter to within an inch and a half of the Ankle.* (Bridgewater Infirmary.)

September 14th, 1822.—Elizabeth Parsons, ætatis twenty-seven, a young woman of a plethoric habit, was suddenly seized with a violent pain on the outer side of her right knee, whilst engaged in her usual occupation, that of house-maid in a gentleman's family. This pain continued for two days to increase, during which time there came on considerable swelling and inflammation, extending up the thigh and down the calf of the leg, attended with much fever and other constitutional disturbance. She was confined to her bed, was cupped and had leeches applied, and suitable medicines given.

On the sixth day, it was discovered, on examination, that matter had formed on the outer side of the knee, where the patient first complained of pain. It was therefore judged expedient to open the abscess; which was accordingly done by making a small puncture with an abscess-lancet, by which about four ounces of thick pus were evacuated. This, however, did not afford her the anticipated relief. The inflammation of the leg and thigh went on. Poultices and fomentations were applied, and, although the discharge from the puncture was considerable, the pain and constitutional disturbance continued: the latter, indeed, rather increased.

On the tenth day, a probe, twelve inches in length, was passed into the wound in a direction downwards, and it was found to extend to within an inch and a half of the external malleolus. It was then taken out, and its course directed up the outer side of the thigh; and in this direction the extent of the sinus could not be reached. The surgeon, considering a free incision as the most probable mode of relieving the constitutional symptoms, as well as of checking the sloughing of the cellular membrane, proceeded to lay open the entire extent of the sinus downwards, to within an inch of the external malleolus. The whole of the cellular membrane of the leg was found to be in a sloughing state.

On the following day, a free division of the sinus, extending upwards, was made to within an inch of the great trochanter of the thigh. The immense extent of the wound gave to it a very formidable appearance, particularly as all the cellular membrane was in a sloughing state, so that the finger could, in some parts of the thigh, be nearly passed round between the muscles and integuments. The patient was supported with wine and a generous diet]

Before two days had elapsed after the operation, the benefit resulting from this free division of parts was manifest, both locally and constitutionally; every thing assumed a most favourable aspect; and within a day of ten weeks from the division of the sinuses, she left the infirmary with the wound perfectly healed, with the exception of a small place about the size of a sixpence, and an œdematous state of the limb.

19, *George-street, Hanover-square*; *December* 11*th*, 1826.

INJURIES OF THE HEAD.

Cases of Injuries of the Head, treated at the MIDDLESEX HOSPITAL.

WOUNDS of the head derive their importance from their connexion with, or from their proximity to, the brain: the following series of cases will therefore commence with the most simple injuries, viz. those of the scalp.

I. *Case of a Lacerated Wound of the Scalp, which was followed by Erysipelas, and by the Death of a Portion of the Skull.* Treated by Mr. JOBERNS.

Daniel Maynard, ætatis sixty-three, a fine healthy looking old man, was brought to the hospital on the evening of the 7th of November, 1825, with an extensive laceration of the scalp. He said that he had been driving a hackney-coach; that the box broke down, and that he fell forwards on his horses, and from thence to the ground. The horses were frightened by his struggles to extricate himself, and set off at full speed: he still grasped the reins and held the whip, so that he was dragged a considerable distance with great rapidity. He was picked up in an almost insensible state, and conveyed to a surgeon. When he had somewhat recovered his senses, he was brought to the hospital.

The wound of the scalp commenced just above the right ear; it extended to the external angular process of the frontal bone on the same side, and then took a direction upwards and backwards, and terminated at the vertex. Thus a large flap was formed, which was reflected upon the occiput: this flap-like portion of scalp was much bruised, and on either side was covered with mud. The pericranium was torn off extensively, leaving a large portion of denuded bone. There was a small and inconsiderable wound at the back part of the head.

The head was shaved; the loose and ragged portions of the pericranium were removed; and the flap of the integuments was made perfectly clean. It was then replaced, and retained in its situation by adhesive straps and a roller lightly applied. He took a dose of Calomel and Jalap, which procured free evacuations from the bowels.

On the following morning, the pulse was quick and small; the tongue was white and moist, and the skin dry. The bandage was removed: the edges of the wound were observed to be red, and surrounded by a blush of inflammation; the wound appeared to be in a state approaching to suppuration.

He was ordered to take the following draught three times a-day:—Haustus Salini ℥ ij.; Vin. Antim. T., Spirit. Æther. Sulph. C. āā m. xxv̄. And a pill containing Calomel gr. iij.; Opii gr. j. at bed-time.—Low diet.

10th.—He remained much in the same state as regarded the general symptoms. The pulse was feeble, and the tongue clean; the wound was suppurating, and discharged a healthy pus, but its edges were far separated. An erysipelatous inflammation had spread from the wound, and extended down the neck.

As the pulse had diminished both in frequency and strength since yesterday, the saline mixture was omitted.—Inf. Gentianæ C. ℥ jss.; Træ. Gent. C. ʒ j. M. fiat haust. ter in die sumend.—Vin. rubri ℥ ij. quotidie.—He was allowed a more generous diet.

12th.—The erysipelas had somewhat diminished. He complained of no pain in the head, but merely of soreness in the wound, the edges of which had retracted, and exposed parts of the parietal bone denuded of its periosteum. Pulse still small and weak.

Vin. rubri ℥ iv. quotidie.—The bowels being confined, some aperient medicine was prescribed.

16th.—The wound was now suppurating kindly, but its edges had receded still farther, and left uncovered a portion of bone about nine or ten inches in circumference. The erysipelas had declined.

Inf. Cinchonæ ℥ jss.; Træ. Cinchonæ C. ʒ j. ter die sumend.

21st.—Appeared to be improving. The granulations were shooting up, and looking very healthy. The exposed part of the bone was of a whitish-grey colour, and seemed to have lost its vitality.

He continued to take his wine and bark; and occasionally, when any symptoms of irritation arose, he took Calomel gr. iij.; Opii gr. j. at bed-time.

December 5th.—So favourable had been the progress of this case, that it was thought unnecessary to lengthen it out by a daily report. To-day, however, he appears dull; his temper is easily ruffled, and he is inclined to be sulky. He refuses his medicines, but promises to take them at night. The wound no longer secretes a bland and healthy pus; its surface is dry, and a sanious discharge oozes from it. The tongue is dry, and covered with a yellowish fur.

Three grains of Calomel and three grains of Antimonial Powder to be taken at night.

6th.—He is delirious, and has been so during the whole of the night. Tongue brown and dry; skin hot, and without perspiration; pulse weak and fluttering. He much resembles a patient in the last stage of continued fever.

Haust. Salin. ℥ ij.; Vin. Antim. T. m. xx. sextis horis sumend.—The bark to be discontinued.

Towards evening, he fell into a comatose state, and died during the night.

Dissection.—The pericranium surrounding the dead portions of bone, as seen externally, was much thickened, and, on being separated from the living bone, the latter presented a worm-eaten appearance: it was perforated by numerous minute holes, which seemed to have been caused by a sort of interstitial absorption, which had been going on in the substance of the bone. The same appearance presented itself on the internal surface of the skull. A small portion of bone, far removed from the centre of the external caries, was diseased throughout its whole thickness. The dura mater at this part had separated from the bone, and was thickened; the surface of the brain immediately beneath was not discoloured. The whole mass of the brain appeared to have been in a state of general excitement, for an effusion of serum into the ventricles had taken place: these were much enlarged. No obvious appearances of inflammation were present.

The operation of trepan, in such a case as the above, becomes a most difficult question. It is a most dangerous proceeding to cut away so large a portion of the skull. The circumstances of the case should be well weighed in the mind of the surgeon. It is an established rule that, if the operation is to be performed, it must be done before the symptoms of excitement come on, or after they have subsided.

II. *Case in which the Scalp and Pericranium were destroyed by a Burn, and the Bone rendered Carious.* Treated by Mr. SHAW.

March 22d, 1826.— —— Henderson, aged thirty-seven. The anterior part of the right parietal, together with a portion of the frontal bones, having the coronal suture passing through the centre, are denuded of their scalp and periosteum; the surface has lost all the florid appearance of living bone; it is dry and of an ash-colour, but here and there it is beginning to put on the darker hue of caries. A fissure, sufficiently large to admit the rounded extremity of a common probe, marks the recession of the living from the dead bone. The right eminentia frontalis is similarly diseased; and the whole is surrounded by an elevated line of dark-coloured unhealthy granulations.

It appears that this man has been subject to epileptic fits for the last twenty years: these fits occurred at irregular periods, the intervals between which were seldom prolonged beyond eight weeks. About ten weeks ago, while sitting alone and near the fire, he fell from his chair in a fit, and his head came in contact with the heated bars of the grate: a severe burn of the scalp, covering a considerable portion of the right parietal and a part of the frontal bones, was the result. About four or five days after this accident, the injured parts sloughed, and the bone was exposed. He had now for the first time an attack of maniacal delirium, which lasted about two days; and he has since had three similar paroxysms. It is stated that, on the decline of these, he has usually fallen into a profound sleep, from which, after some hours, he has awoke perfectly recovered. According to his friends, these attacks have observed regular intervals of three weeks. He has a slight impediment in his speech, but, on enquiry, it was found that he has always been subject to this. His general health did not seem to be affected until about three weeks since; his strength then began to diminish, since which time he has become gradually weaker, and he is now unable to walk without assistance. His intellects have suffered, his memory fails him, but still his answers to questions are perfectly rational. He does not complain of any pain in his head, except soreness of the wound. The pulse is seventy-five, and natural; tongue clean.

He is to take at bed-time, of Calomel gr. iv.; Jalapæ gr. viij.; Antimon. Powder gr. iij.—The bowels are to be kept moderately lax with the compound Senna Mixture; and he is to take a Saline Mixture, with small doses of the Tartarised Antimony, three times a-day.

29th.—No alteration in his symptoms occurred before this morning, when his periodical attack of mania returned, but not with more than its usual violence, although so severe as to call for the coercion of a straight-waistcoat. Pulse ninety, and full; tongue dry and brown. His symptoms generally resemble those of a patient labouring under acute typhus.

Ten ounces of blood were taken from the temporal artery, and a blister was applied to the nape of the neck; the head is to be shaved, and a cold lotion applied.—He is to take Calomel gr. iv. Antimon. Powder gr. iij. at night; and continue the mixture as before.

31st.—He is again becoming rational, and answers questions. The muscles of the face corresponding with the affected side of the head are partially paralysed.

April 3d.—He became quite paralytic on the morning of the 1st, and in the afternoon gradually fell into a comatose state. He remained in this condition until his death, which took place last night. The surface of the body was covered with petechiæ.

Dissection.—The skull-cap being removed, it was found that a part of the dura mater, not much larger than a shilling, and situated under the larger portion of diseased bone, was detached from the skull, and thinly covered with an extremely minute quantity of a sero-purulent fluid: lymph had been thrown out upon the surface, so as to produce some degree of inequality and thickening in this part of membrane. A small shred of lymph was found attached to the inner and secreting surface; the other parts of this membrane were healthy. No thickening of the arachnoid membrane, or other signs of inflammation, were observable, except about an ounce of limpid serum contained in the ventricles. In other respects the brain seemed perfectly healthy, and retained its natural degree of firmness throughout.

It does not appear that this man had at any period symptoms which indicated the propriety of an operation: he had none of those which occur from the presence of dead bone; none of those which are so characteristic of the inflamed dura mater. Nor can we revert, with a better prospect of success, to the old theory of compression, in which the minutest quantity of pus was gifted with so much importance. The maniacal delirium occurred, most probably, before the bone was dead throughout its substance; and again, it entirely subsided without the removal of the cause, supposing it to have depended upon the caries. These circumstances recall to our recollection the observation of Dr. Prichard, that, "in very severe and inveterate cases of epilepsy, the paroxysms of this disease are often followed by attacks of maniacal delirium, which are generally of a most violent kind. These fits most commonly abate in a few days after the epileptic attacks have ceased."*

In considering the circumstances of the case, it must be remembered that the patient had been for many years the subject of severe epilepsy; and that he had a large portion of the skull deadened by an agent the most destructive and immediate in its influence on living parts. The disposition of the living bone to recede from the dead became most important, as indicating the possibility of two occurrences: first, that the disease extended no further than the deploe, and that an exfoliation might take place; secondly, it held out a prospect that both tables might be thrown off by a natural process, should the disease have extended through them; as in the cases related by Mr. Pott and Mr. Abernethy.

CONCUSSION.

The following cases are good examples of various degrees of concussion, with their consequences.

III. *Case of Concussion, followed by Inflammation of the Brain.* Treated by Mr. Bell.

William Spirit, ætatis twenty-four, was admitted October 10th, 1826. Four days before his application at the hospital, he had fallen on some pavement from a hayloft, a height of fifteen feet: he was stunned by the fall, and remained insensible for a few minutes. He shortly afterwards felt some pain in his head, which had been gradually increasing up to the time of his admission.

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* Prichard on Nervous Diseases, p. 62.

The pain in the head was now exceedingly acute: it was confined principally to the occiput and forehead; he occasionally felt a pain shoot through the head from temple to temple. The temperature of the scalp was increased; there was great intolerance of light. He had a dull and heavy look, —an expression of countenance very remarkable in some forms of continued fever: the eye presented that appearance which some have described as an *intellectual dulness* combined with *physical brightness;* the upper eyelid dropped over the eyeball. The pulse was about ninety, quick and hard, but rather weak; the bowels were open; the tongue was dry and furred. The symptoms altogether were so like those of continued fever, that a person, ignorant of the previous history of the case, would have declared it to have been a case of fever. There had been a small and superficial wound on the occiput, which was nearly healed.

The head was shaved, and a cold lotion applied. He was well purged with Calomel and Jalap.

11th.—The symptoms were somewhat relieved: the tongue was moist and less furred; pulse continued much the same as before.

Sixteen ounces of blood were taken from the back of the neck by cupping. —Haust. Salin. ℥ ij.; Vin. Antim. Tart. ʒ j. ter in die sumend.

16th.—His head was much relieved by the cupping. His pulse retained much of its sharpness, but it was compressible; his tongue was clean and moist. The wound of the scalp was perfectly healed.

Hirudines ℥ xij. pone aures applic.—To continue the antimonial mixture.

He lay for some days in a dull, heavy, and stupid state. By a perseverance in the local depletion, the pain in the head gradually abated; and, in proportion as this took place, in the same proportion were the natural functions of the brain restored. He was discharged October 24th. There was still to be observed a want of "speculation in his eye," and although he was free from pain in the head, yet this appearance seemed to show that the disease was not completely subdued. He left the hospital with directions to continue the antimonial mixture, to live low, and remain perfectly quiet for some days.

October 26th, he again made application for admission. The pain in the head returned soon after he left the hospital. He stated that, on the day following, the noise of the carriages rang in his ears, and at length became very distressing to him. Walking now gave him pain in his head: this was greatly aggravated on coming down stairs. When desired to stamp on the floor, the pain in the head was much increased. The light was painful to him; pulse eighty-eight, quick, and rather hard.

Nauseating doses of Tartarised Antimony were again prescribed, and leeches were applied to the temples; the nape of the neck was blistered; and he was frequently purged with Calomel and saline aperients.

Under this plan of treatment, all the unfavourable symptoms were removed. He regained his wonted expression of countenance, (which, by the by, appears never to have been endowed with much vivacity;) and he was discharged on the 7th November, being at that time perfectly convalescent.

IV. *Case of Concussion, followed by Symptoms of Inflammation of the Brain.* Treated by Mr. Shaw.

William Todd, ætatis thirty-four, a carpenter, a man of spare habit, and of the melancholic temperament, fell a perpendicular height of nine feet, upon a stone floor; and he says that he struck upon his head. However this may be, he remained perfectly insensible for twelve hours. When he had recovered so far as to recognise those around him, he began to complain of a dull and aching pain in his head: this increased, and on the second day after the accident he came to the hospital, and one of the dressers cupped him at the back of the neck, abstracting twelve ounces of blood.

He was brought here on the 23d October, six days after the fall, and was admitted. He had great pain in the head, which was constant. His rest had been disturbed: indeed, he stated that he had not slept for five nights or days. The pain occasionally darted through the head. There had been no remission of the pain in the head since the accident: on the contrary, it had daily increased in severity. There was increased heat of scalp, and much intolerance of light; the eye presented the appearance described in the last case, only that the *intellectual dulness* was greater than in the preceding. The upper eyelid nearly covered the eyeball. This falling of the eyelid, and inability to raise it completely, was not wholly dependent upon the dislike to light; for, when the room was darkened, the heaviness of the eyelid still remained. He lay in a half comatose state; he was quite rational, and had at no time been delirious. Pulse fifty-five, quick, and vibrating, but at the same time weak and compressible; tongue dry, and covered with a yellow fur. No external injury of the head could be detected.

From the long continuance of these symptoms, which appeared to be evidently those of inflammation of the brain,—from the weak and compressible pulse,—from its slowness,—and from the half comatose state in which he lay, it was considered that general blood-letting was not indicated.

Twenty leeches were applied to the temples; and he took a purge of Calomel and Jalap.

24th.—Pulse softer; pain in the head somewhat relieved. Seven ounces of blood were taken from the arm, with a view of ascertaining whether it presented the general appearances of inflammation. The blood was slightly cupped, but the buffy coat was hardly perceptible.

The head was shaved. He was directed to take Calomel gr. v. at night; and the following mixture three times a-day—Haust. Salin. ℥ ij.; Vin. Antim. Tart. ʒ j.

25th.—The symptoms were less severe, although the pain in the head was still distressing. He slept much better.

Hirudines xxiv. temporibus applic.

27th.—The improvement in this man's condition was very striking. His rest at night was now undisturbed. Eighteen leeches were applied to his temples yesterday, since which time his head has been almost free from pain.

29th.—A slight increase of pain in the head, which yesterday had been altogether absent. Pulse was harder, stronger, and more frequent than on the preceding day; although even now it did not exceed in frequency the standard of health. Bowels confined.

The house medicine was taken every two hours, in divided doses, until the desired effect was produced; and eighteen leeches were applied to the temples.

It was found necessary to continue the local depletion for some weeks. The nape of the neck was frequently blistered; after which a seton was introduced. By these means the symptoms of cerebral inflammation were removed. His head remained giddy for some time; but, as his strength returned, this disagreeable sensation wore off, and his countenance lost much of the dull and heavy cast which had characterised it throughout. He left the hospital.

There is something worthy of remark in the two cases of concussion just related,—namely, the masked appearance which inflammation of the brain is apt to put on when that organ has received a general shock. The whole brain, with its delicate system of vessels, is much injured by the concussion, so that these vessels appear to be incapable of undergoing that great increase of action which accompanies the high delirium of phrenitis. A dilated and debilitated state of the vessels of the brain is the consequence of this injury: it allows the general symptoms of inflammation of the brain to be, as it were, mixed up with those which accompany apoplexy; and, if the inflammatory symptoms run so high as to cause delirium, that delirium partakes of the nature of typhomania. Thus, in the above cases, the patients lay for some days in a half-comatose state. In the slighter injury, the pulse rose but little above the natural standard; in the more severe injury, the pulse was actually below the natural standard; and in both cases the pulse was weak and compressible.

The following case will illustrate this point: it will show the nature of the injury which the brain suffers in concussion; and that, when the patient dies from its effects, he dies truly apoplectic.

V. *Fatal Case of Concussion of the Brain.* Under the care of Mr. Bell.

Richard Bainbridge, ætatis thirty, was brought to the hospital, ten o'clock A.M. November 6th, 1826. He had been repairing the steeple of a church; a part of the scaffolding gave way, and he was precipitated from a height of thirty feet. He was quite insensible when taken up, in which state he remained when brought to the hospital.

The breathing was laboured and stertorous; the pupils were dilated; the surface was cold, and he was pulseless; froth issued from his mouth; and, in short, he appeared to be in a dying state. There was a large and irregular wound on the vertex, and the skull was extensively fractured. The bone was broken into several pieces, and there was a small portion slightly depressed. An hour after admission, the pulse could be distinguished at the wrist: all the other symptoms continued the same. He lay in a deep lethargy, from which nothing could rouse him.

At this juncture Mr. Bell visited the patient. Mr. Bell considered that no operation could benefit the condition of the patient. He imagined that these symptoms arose from the general injury which the brain had received, and not from a local cause which was remediable by an operation.

In the evening, the pulse at the wrist became quite distinct; the heat of the surface had increased; and, on bringing a light to the eyes, the irides were observed to contract and dilate irregularly. No improvement in the other symptoms. Mustard cataplasms were applied to the feet.

7th.—We were rather surprised to find this man still alive, and precisely in the same condition as on the preceding night. He had been unable to swallow any thing since his admission; he was therefore ordered an aloes clyster, and the head was carefully shaved.

Mr. Bell saw him, and still was of opinion that this was not a case for operation; but, as no harm could accrue from the removal of the loose portions of bone, and as the danger of the patient could not be increased by such an operation, it was accordingly performed. The wound of the scalp was enlarged, and it was found necessary to set on the trephine to remove the shelving pieces of bone.* Some sensibility was manifested by the patient on the scalp being divided.

Several loose pieces of bone were now removed, so that no depressed portion remained. A thin film of blood merely was found upon the dura mater. A fissure was observed extending towards the right temple, and another in the opposite direction towards the left parietal eminence. The object being accomplished,—namely, the removal of the loose portions of bone,—the wound was afterwards properly dressed; the dura mater was equably supported by pieces of oiled lint and a roller aptly applied.

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* By the bone shelving, is meant the breaking up of the inner table of the skull to a greater extent than the outer; so that it is impossible to remove such a portion of bone without the application of the trephine, or the cranium saw.

Ten P.M.—The respiration continued the same; the accessory respiratory muscles were observed to be in strong action. The patient was turned upon his side, with the immediate effect of removing the stertor; but this position, by fixing one side of the chest, rendered respiration more laborious. The bowels had been opened by the glyster. The pulse was exceedingly rapid and rather hard, although by no means strong. The heart appeared to be labouring, and gave one the idea that it was oppressed with blood. He was bled to ten ounces, and the sinapisms to the feet were ordered to be continued.

He died about three o'clock on the following morning.

Dissection.—A fissure extended from the vertex, and ran down through the posterior part of the skull: it crossed the right parietal eminence, and reached the base of the skull, terminating within an inch of the great foramen. Another fissure ran in an opposite direction towards the right temple. A delicate film of blood was found upon the dura mater, under the line of the posterior fissure. The surface of the brain was covered with bloody spots of extravasation, presenting the appearance usually termed bloodshot: these spots were general on the exterior surface of the brain. The vessels of the brain appeared to be turgid with blood, but the minute ramifications were not injected as in inflammation. On cutting the brain, the divided vessels appeared to be enlarged, as if dilated. The structure of the brain seemed to be broken down at points; for here and there it was evidently softer than natural, and at these points extravasated spots of blood were seen. A minute quantity of blood was found in the base of the skull.*

ULCERATION OF THE STOMACH.

Case of Ulcer of the Stomach. By JOHN HUNTER, jun. M.R.C.S.

M— C—, a married female, ætatis twenty-five, was suddenly attacked, on the 16th August, 1826, with excruciating pain in the præcordia, referred more especially to the umbilicus, which part was so exquisitely tender that she could scarcely bear it to be touched. Her pulse was seventy-two, small and soft; tongue clean; respiration but little affected, unless drawn deep. She had eaten a hearty dinner with the family about an hour before, consisting of duck, fruit-pie, plums, &c., and had just gone upstairs, apparently in her usual health, when this seizure occurred. She took Tinct. Opii gtt. xxx. and shortly after vomited, bringing up from the stomach above a quart of aliment, partly digested. She drank freely of warm water to encourage the vomiting, and repeated it several times until it returned clear and free from smell, and the nausea had entirely ceased. This, however, afforded no relief, and she still continued to writhe and groan in great agony.

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* The first of these cases (page 15,) was treated by Mr. SHAW, not by Mr. JOBERNS. The commencement of the paper, being in the preceding half-sheet, had passed the press before we discovered the mistake. The cases are communicated by a gentleman who is not himself a surgeon of the hospital.—EDITOR.

Fomentations were applied over the abdomen; the opiates repeated at short intervals, until she had taken 120 drops of the tincture, and two grains of the solid opium; and twenty ounces of blood drawn from the arm (producing faintness).

By these means she obtained a slight remission, but nothing like a total cessation from pain. She afterwards took two grains more of opium; and a blister was prescribed for the pit of the stomach, but applied to the left hypochondrium, from her dread of its increasing the pain.

On the following morning, her pulse was still seventy-two, rather fuller, but very weak; tongue furred; thirst excessive; great restlessness; pain constant, and the same tenderness about the navel; great depression of spirits, and a strong conviction on her mind that she should die. She had dozed occasionally during the night, but awoke on the slightest motion, with an aggravation of pain.

Ol. Ricini ℥ ss. was ordered, and repeated every hour till three ounces had been taken, without affecting the bowels or producing the least nausea. A large enema was then administered, but quickly returned, with a slight admixture of feces; and subsequently a dose of Calomel and Opium was given, after which she had several dark-coloured liquid stools. Leeches were also applied to the belly, and the fomentations continued.

In the course of the morning, she sank into an alarming state of collapse: her face, previously florid, became quite blanched; her extremities cold; the whole surface of the body bedewed with clammy sweats, and the pulse at the wrist not perceptible; but no abatement of the pain. From this condition she grew gradually worse till midnight, when she expired, just thirty hours after the attack. She remained perfectly sensible till near the time of her dissolution.

This young woman had dark hair and eyes, and a very delicate complexion, (though latterly her face was always flushed.) She was rather of an irritable disposition; had been married five years, and her husband treated her so ill that she had parted from him several times; but this did not seem to prey upon her spirits, which were very buoyant, and she moved about actively. She had complained of pain at the navel since the birth of a child above four years back, and attributed it to some mismanagement in her lying-in. Her hand was often pressed to the part for relief, and she was in the habit also of lying upon her face in bed, Her appetite was generally good: she preferred rich and high-seasoned food; took a great deal of salt and vinegar, and occasionally spirits; was never subject to nausea or vomiting. She was very fat, but supposed herself to be dropsical, on which account she was under the care of a physician, who had treated her with Pil. Hydrargyri, Pil. Scillæ C., and saline aperient medicines.

Appearances on inspection of the body.—Abdomen: The parietes and larger omentum loaded with fat; above two quarts of an opake serous fluid, with gelatinous flakes floating in it, in the cavity of the peritoneum. Increased vascularity of the peritoneal lining of the parietes. Erythematous patches on the surface of the small intestines, but no adhesion, though much lymph thrown out about them. The intestines filled with air, but devoid of feces; no appearance of inflammation on their internal coat. The principal seat of the complaint was in the stomach: in the anterior surface of this viscus, near the lesser curvature, was an ulcerated opening, of an irregular figure, nearly circular, about two-thirds of an inch in diameter, with a smooth polished edge externally, formed by the peritoneal coat only. The internal margin of this aperture was composed of the mucous and muscular coats united; the upper half of its circumference thickened, white, and shining; the lower half irregular. No contiguous inflammation, either of the internal or external coats. The liver was clayey and exsanguinous. The gall-bladder filled with bile. The spleen somewhat enlarged. The pancreas and kidneys healthy.

Thorax: The lungs presented their usual appearance. A layer of fat on the anterior surface of the heart quite concealed its muscular structure; and in the anterior mediastinum was a further deposit of it.

The ulcer of the stomach exactly corresponds with another specimen of the same disease in the museum of St. Thomas's Hospital, where also this stomach is deposited. It is probable, from the long existence of pain at the navel, that its action was very gradual; and, from the superabundance of fat throughout every part of the body, it appears to have formed no impediment to the process of digestion. The opening of this ulcer through the peritoneal coat occasioned, without doubt, the violent symptoms preceding death.

Mincing-lane; November 1826.

EMPHYSEMA.

Case of Emphysema, in which the Stethoscope afforded a valuable Diagnosis. By JAMES SYM, Surgeon, Kilmarnock, Ayrshire.

IN Mr. BELL's case of Emphysema, published in the Number of this Journal for September, the general symptoms were sufficiently distinct to prove that air existed in the pleural sac. In the following complicated case, the evidence obtained from the general symptoms alone would have been exceedingly perplexing, had I not employed the stethoscope, from which a clear and certain diagnosis was obtained.

On the 26th April, 1826, a tradesman, fifty years of age, and subject during the last twelve years to asthma, originating in an injury of the chest, fell down a stair upon his left side. The accident happened at four o'clock P.M.; and, although the pain in his side was so acute that he could not breathe without moaning or even crying out, this did not excite much alarm, because he was in a state of intoxication. Accordingly, I was not called till about ten o'clock, when I found that the pain was situated at the angle of the ninth rib, that emphysema had occurred, and that he had expectorated blood. I could neither detect crepitation of the bone nor discontinuity of the surface by the touch, but the stethoscope communicated to the ear a distinct jerk, at the moment each expiration was completed, and when the chest began to expand for a new inspiration. The emphysema could be traced over the back, into the left axilla, across both breasts, (which sounded, when struck, like inflated bladders,) and up the front of the neck, (which presented a broad flattened aspect.) Upon applying either the ear or the stethoscope to the surface of the emphysematous swelling, the air was heard moving with a crackling noise through the cellular membrane, during the motions of the chest; and, when the intervening air was pressed aside, and the stethoscope kept steadily fixed over the ribs, the respiratory sound transmitted from the lungs was loud and vocal. There was no pectoriloquy. He coughed a little; and his asthma was very distressing, although he said it had often been as bad. Pulse 100, strong, hard, and full; tongue dry and brown in the middle; urgent thirst; face flushed.

Compress and bandage. Venesection to ℥ xxx. Draught of Laudanum and Antimonial Wine. Epsom Salts in the morning.

27th.—In the morning, I found his pulse eighty-eight and soft, and he breathed more easily; but he had passed a restless night, and the cough had been very annoying. Emphysema extended over the face and arms. After pressing aside the swelling from the sternum, the sound emitted by percussion was found to be natural. Respiratory sound of the lungs still clear, both at the seat of the injury and elsewhere. Respirations twenty-four in the minute; expirations laborious, attended with asthmatic wheezing, and occupying double the time of the inspirations.

In the evening, he complained much of pain in his side, and his pulse rose to 100.

Venesection to ℥ xij.

28th.—Expectorates a little mucus, and is less uneasy. Pulse 112, respirations twenty-eight. Seems still to labour under a considerable degree of asthma; and, before expectorating, the bronchial tubes are so much distended by mucus that they emit only a rattle, whilst the sound emitted by the other parts of the chest is clear, and vocal in some places, in others sibilous.

29th.—I was sent for at two o'clock in the morning. His friends had crowded into his room, in expectation of his death. His mind and expression of countenance were extremely anxious. Complained of an overwhelming sense of oppression in the chest, difficulty of breathing, and a threatening of syncope. Respirations hurried, wheezing, and rattling, with mucus, of which he had several times expectorated a little. Could not bear the smallest deviation from the erect posture of his chest. Pulse rapid; face flushed; skin hot. The distress he seemed to suffer from defective respiration was so agonising, that I apprehended internal emphysema; and it was only by means of auscultation that I could ascertain whether the aggravation of symptoms ought to be partly attributed to that cause, or entirely to the accession of an asthmatic paroxysm, rendered unusually severe by the injury of his lungs and the alarmed state of his mind. Upon applying the stethoscope, I perceived distinctly the respiratory sound down to the very seat of the injury, where it was loudly sibilous. I therefore bled him to ten ounces; tightened his bandage, which he had undone; scarified the skin below the left clavicle, in order to relieve the bronchial tubes and trachea from confinement; dismissed all his visitors except a single attendant; and allayed the excitement of his mind by assuring him that he was not threatened with suffocation, as he himself apprehended, and that he only laboured under one of his fits of asthma. In this opinion I was speedily confirmed by the relief he derived from a copious expectoration of mucus; after which the cure proceeded without any other untoward occurrence, and in the course of three weeks the emphysema had disappeared.

Remarks.—The value of the diagnosis obtained from the stethoscope in this case will, I think, be admitted, when we reflect that the symptoms which presented themselves on the morning of the 29th closely resembled those occasioned by effusion of air into the pleural sac; and that, when this occurs to such an extent as to endanger the patient's life, we are directed by the best surgical authorities to puncture the pleura between two of the ribs. Had this operation been performed, it is probable that an additional wound would have been inflicted upon the lung; because the existence of the respiratory sound close upon the fracture of the rib, combined with the previous history of the case, affords ground for suspecting that the lung adhered extensively to the parietes of the thorax.

URINARY CALCULI.

Observations on the Analysis of Urinary Calculi, particularly those of a mixed nature. By John F. Wood, Lecturer on Chemistry in the School in Great Windmill-street.

About two years ago, an opportunity occurred to me of analysing the urinary calculi contained in the museum in Great Windmill-street; and since that time I have also been favoured by Mr. Cross, of Norwich, and by the medical officers of the Kent and Canterbury Hospital, with the use of their collections for the same purpose. The number of these concretions thus brought under my notice having been considerable, I have ventured to publish the results of their analysis, in the hope of at least affording some assistance to any one who may hereafter be inclined to prosecute inquiries into this very interesting and important branch of medical chemistry.

It will be at once perceived that I have avoided entering into the mechanical and chemical qualities of urinary calculi with any degree of minuteness, as sufficiently accurate descriptions of them are to be found in most chemical works, particularly in the very excellent publication of the late Dr. Marcet upon this subject. I have therefore confined myself to a detail of the most ready means of distinguishing them from one another, and of analysing them when the various ingredients are intimately blended together. Indeed, I know of no publication containing any directions for the analysis of mixed calculi; and the want of such information proved at the commencement a source of considerable inconvenience to me, from which I hope in some degree to relieve others, by a detail of the means employed for its removal.

Calculi, in order to be analysed, must first be divided, that the different laminæ may be seen, and analysed apart from the others. This operation should be carefully performed with a very fine saw, in that direction which will expose the most extensive surface when divided: a few grains should then be scraped with a penknife from each lamina, commencing with the nucleus, and proceeding towards the exterior; care being taken to select the central portion of each layer, that it may not be mixed with those on either side of it.

The apparatus required is simple, and the materials are few in number. Some watch-glasses, a spirit-lamp, a brass stand with rings for holding the glasses, glass rods for stirring the solutions,* a pair of platina forceps, a piece of platina foil, a blowpipe, and some stoppered bottles, containing pure nitric, muriatic, and acetic acids, solutions of potassa, ammonia, carbonate of ammonia, and oxalate of ammonia, with distilled water, complete the list.*

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* I have found small glass tubes, drawn out to a fine point, which may be readily done by the heat of a spirit-lamp, extremely useful for removing the fluid from

At present only six ingredients have been discovered in urinary calculi,—viz. uric acid, urate of ammónia, cystic oxide, phosphate of lime, oxalate of lime, and the phosphate of ammonia and magnesia. One or two other substances have been discovered, but in so few instances as not to deserve mention with the others: such are carbonate of lime, and the two substances discovered by Dr. Marcet, the xanthic oxide and the fibrinous calculus.

These may be distinguished from each other by the following tests:—Three of them are soluble in cold solution of potassa,—the uric acid, urate of ammonia, and cystic oxide. The first dissolves in cold solution of potassa, and evolves no ammoniacal odour during its solution. On the addition of dilute muriatic acid, a copious white precipitate falls.

Urate of ammonia resembles the last, excepting that copious fumes of ammonia are disengaged during the solution, which may be detected simply by the smell, or by holding the stopper of the nitric or muriatic acid bottle over the glass containing the materials, when dense white clouds of nitrate or muriate of ammonia will instantly be produced; or a piece of moistened turmeric paper will be reddened, if held over the glass. In either case the effect will be much increased by gently heating the glass. This variety is also soluble, with comparative ease, in distilled water; a fact first noticed by Dr. PROUT.

Cystic oxide calculi dissolve readily in cold solution of potassa, give off no ammoniacal fumes, and afford no precipitate on the addition of dilute muriatic acid.

Four varieties are soluble in dilute acids,—namely, the phosphate of lime, the phosphate of ammonia and magnesia, or triple phosphate, the oxalate of lime, and the cystic oxide; and, of course, any mixture of them. All these are soluble in muriatic acid diluted with four parts of water, and are all precipitated by ammonia and the fixed alkalies, excepting the cystic oxide, which, being equally soluble in acids

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the undissolved portion, which is easily effected by carefully immersing the point in the fluid, and applying the mouth to the other extremity. They are also useful for experiments on very minute quantities; as, by filling them with any fluid, and closing the larger end with the finger, the fluid is retained, and may be allowed to escape gradually in quantities as small as can possibly be required.

* Pieces of broken window-glass answer for many purposes as well as watch-glasses, and are of course much more economical.

and alkalies, is of course not affected. It may, however, be thrown down by carbonate of ammonia. These may be distinguished from each other in the following manner:

The phosphate of lime calculus, when heated before the blowpipe, undergoes a very trifling alteration; no peculiar smell is perceived, excepting that of burning animal matter when the heat is first applied; the ash is white, not alkaline, dissolves readily and quickly in dilute acids; and the solution gives a precipitate with pure ammonia, and with its oxalate, provided there be no great excess of acid.

The triple phosphate likewise suffers very little alteration before the blowpipe, unless the heat be very strongly urged, when it fuses imperfectly. Copious fumes of ammonia are disengaged. The ash is generally brown, not alkaline; is soluble, but not readily, in dilute muriatic acid, and precipitable in the form of crystalline grains by ammonia, showing the re-formation of the triple phosphate. The oxalate of ammonia does not precipitate this salt when no phosphate of lime exists in combination with it.

The peculiar fetid odour disengaged on the application of heat, and its ready solubility in both acids and alkalies, sufficiently characterise the cystic oxide.

The oxalate of lime calculus, when heated before the blowpipe, blackens, is enlarged in volume, and leaves a great quantity of ash of an intense whiteness, which is soluble with effervescence in dilute muriatic acid, unless the heat have been intense and applied for a long time, when it dissolves quietly. Pure ammonia produces no precipitate from the solution, but a copious bulky one is thrown down by the oxalate of ammonia. This ash gives a deep red tinge to moistened turmeric paper, and is in fact pure lime.

Thus far the analysis is sufficiently easy, the calculi or laminæ consisting of only one ingredient: few calculi, however, are of a nature so simple, the greater number being composed of two or more ingredients, sometimes in separate laminæ, sometimes blended together; and it is in the examination of these that the greatest difficulty is experienced, which I shall endeavour, by the following directions, in some measure to remove.

Uric Acid and Oxalate of Lime.—Calculi of this composition, when digested in solution of potassa, washed and filtered, the potassa will dissolve all the uric acid, which may be obtained by adding dilute muriatic acid to the filtered liquor; and the solid residue, being heated before the blowpipe, will give the results mentioned above. This mixture generally decrepitates loudly when first heated.

Uric Acid and Phosphate of Lime.—This mixture may be treated as the last; the uric acid being dissolved out by potassa; and the remainder may either be heated before the blowpipe, or dissolved in dilute muriatic acid, and will afford the results mentioned under the head of phosphate of lime calculi.

Uric Acid and Triple Phosphate.—When calculi of this composition are digested in solution of potassa, the acid is separated; a very powerful ammoniacal odour is evolved; and the undissolved portion, when well washed and dissolved in dilute muriatic acid, will, on the addition of ammonia, be reconverted into triple phosphate, in the form of small acicular crystals.

Phosphate of Lime and Phosphate of Ammonia and Magnesia, or the Fusible Calculus.—This variety is immediately recognised by readily fusing before the blowpipe into an opake, white, shining enamel. It suffers very little diminution in bulk, gives off copious fumes of ammonia, and the ash is not alkaline.

Phosphate of Lime and Oxalate of Lime.—These calculi do not fuse before the blowpipe, but swell up in proportion to the quantity of oxalate of lime they contain; give out no smell of ammonia; the ash is alkaline, and, if it be dissolved in dilute muriatic acid, the solution precipitated by ammonia and filtered, a precipitate* is produced in the filtered fluid by the oxalate of ammonia. Phosphoric acid will dissolve out the phosphate, and leave the oxalate.†

Uric Acid and Fusible.—These calculi blacken before the blowpipe, diminish in bulk in proportion to the quantity of uric acid, evolve a powerful smell of ammonia, and presently fuse. The ash is very slightly alkaline, dissolves without effervescence in dilute muriatic acid, and is precipitable by ammonia. We are indebted to Dr. **Wollaston** for the following method of analysing calculi of this description:—Digest in cold distilled vinegar, which takes up only the triple phosphate; dilute muriatic acid will next separate the phosphate of lime; and the remainder, which will be the uric acid, may be recognised by the usual tests.

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* This precipitate by oxalate of ammonia, after the pure alkali has produced its full effect, depends upon the existence of lime in the calculus, in combination with an acid easily separable by heat, leaving the lime in combination with the acid in which the ash is dissolved. From this combination ammonia will not detach the lime: it therefore passes the filter in solution, and is afterwards precipitated by the oxalate of ammonia. Now the only two acids of this kind hitherto found in calculi are the oxalic and the carbonic: if it be the latter, the calculus will dissolve, with effervescence, in any acid; if the former, the solution will proceed quietly.

† Dr. Wollaston.

Triple Phosphate and Oxalate of Lime.—This mixture does not fuse before the blowpipe, gives off a pungent ammoniacal odour, swells up in proportion to the quantity of the oxalate, and does not perceptibly diminish in quantity. The ash is more or less alkaline according to circumstances, dissolves readily in dilute muriatic acid, and, after ammonia has precipitated all it can throw down, a further deposition takes place in the filtered liquor on the addition of the oxalate of ammonia.

Fusible and Oxalate of Lime.—This calculus differs from the last only in undergoing a partial fusion after the heat has been applied a short time.

Many calculi contain uric acid in so small a proportion as not to influence their external character and appearance: in these it may readily be detected by placing a small portion of the calculus, or lamina, in powder, on a piece of glass, and adding a drop or two of pure nitric acid; heating it over a lamp, very carefully to prevent it from charring. Should there be the smallest quantity of uric acid, a red colour will appear as the mixture becomes dry, and will be deep in proportion to the quantity of uric acid. A drop or two of a solution of pure ammonia, added when it has cooled, will develope a beautiful purple tinge. If it be an object to ascertain the exact proportion of uric acid, take any given weight of the calculus, and digest it in dilute muriatic acid, and the undissolved portion will be the uric acid.

During my examination of the calculi in the museum of Great Windmill-street, I found one possessing some very extraordinary properties, resembling those attributed to the cystic oxide. Dr. Wollaston, the discoverer of this species of calculus, was so obliging as to sacrifice a portion of his own specimen, to afford comparative experiments; and these fully confirmed the identity of composition of the two calculi. In the same collection is another specimen of this species of concretion, which is extremely rare; for, amongst the many hundred calculi which have been analysed, only seven of this kind have hitherto been discovered, so that, with the addition of the two in this collection, there are but nine cystic oxide calculi at present on record.

In the accompanying table, I have arranged the calculi in a manner similar to that adopted by Dr. PROUT, in his book on Calculous Diseases; and I may remark, once for all, that each specimen was divided, and each layer separately analysed, so that all confusion is avoided, and the result may be depended on as the real composition of the several calculi.

General Character.	Particular Species.	Windmill-Street.		Mr. Cross.		Canterbury.		Particular Total.	General Total.
URIC ACID	*Nearly pure	25	29	13	17	7†	10	45	56
	Mixed intimately with a little oxalate of lime	3		3		—		6	
	Urate of ammonia	1		1		3		5	
CYSTIC OXIDE		2	2	—	—	—	—	2	2
OXALATE OF LIME	Mulberry	2	5	1	1	1	1	4	7
	Hemp-seed calculus	1‡		—		—		1	
	Containing a little uric acid	1		—		—		1	
	With traces of uric acid and of phosphate of lime	1		—		—		1	
PHOSPHATES	Phosphate of lime (nearly pure)	2	20	—	1	—	1	2	22
	Phosphate of lime, with a little oxalate of lime	1		—		—		1	
	Phosphate of lime, with a very little carbonate of lime	1		—		—		1	
	Triple phosphate	1		—		—		1	
	Triple phosphate, with a little oxalate of lime	1		—		—		1	
	Fusible calculus (pure)	5		—		—		5	
	Fusible, with a little uric acid	7		1		1		9	
	Phosphate of lime, succeeded by fusible	2		—		—		2	
	Uric acid, and oxalate of lime	1		4		—		5	
	Oxalate, and uric acid	3		1		1		5	
	Uric acid, and oxalate of lime and uric acid mixed	6		—		2		8	
	Uric acid, and phosphates	4		5		3		12	
	Oxalate, and phosphates	1		—		—		1	
	Oxalate, and phosphates containing a little uric acid	4		—		—		4	
	Oxalate of lime containing a little uric acid, and phosphates	—		1		—		1	
	Triple phosphate, and oxalate	1		—		—		1	
	Uric acid, and fusible with uric acid	2		—		2		4	
	Uric acid, and oxalate and phosphate of lime mixed	—		—		1		1	
	Uric acid, and oxalate of lime and fusible mixed	—		—		§1		1	
	Oxalate of lime, and uric acid and phosphates mixed	1		—		1		2	

ALTERNATING CALCULI	Oxalate of lime and uric acid, and oxalate of lime and triple phosphate	—	26	—	16	1	18	1	60
	Fusible with a little uric acid, and oxalate of lime	—		—		1		1	
	Uric acid and oxalate of lime with a little triple phosphate, and oxalate and triple phosphate	—		—		1		1	
	Uric acid, fusible and uric acid, and pure fusible	1		—		—		1	
	Uric acid, oxalate, and phosphate	—		3		1		4	
	Uric acid, urate of ammonia, and fusible	—		—		1		1	
	Oxalate, fusible, and oxalate	—		—		1		1	
	Oxalate and uric acid, uric acid, and fusible	—		—		1		1	
	Urate of ammonia and oxalate of lime, fusible and uric acid	—		1		—		1	
	Oxalate and uric acid, phosphate of lime (pure), and uric acid and phosphate of lime	—		1		—		1	
	Oxalate of lime and uric acid, oxalate and fusible, fusible containing a very little oxalate, and pure fusible, (4 distinct layers)	1		—		—		1	
	Uric acid, phosphate of lime, oxalate of lime, and triple phosphate, (4 distinct layers)	1		—		—		1	
MIXED CALCULI	Uric acid and oxalate of lime	1	11	1	4	3	3	5	18
	Uric acid and fusible	6§		—		—		6	
	Uric acid and urate of ammonia	1		—		—		1	
	Uric acid and phosphate of lime	—		1		—		1	
	Uric acid oxalate of lime and triple phosphate	1		—		—		1	
	Carbonate of lime and phosphate	2‖		1		—		3	
	Uric acid and oxalate of lime, with a partial coat of fusible	—		1		—		1	
CARBONATE OF LIME, & ANIMAL MATTER ONLY	One set looks exactly like pearls, and are supposed so to be, but their history is not known	2	2	—	—	—	—	2	2
			95		39		33	167	167

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* The nucleus is placed first, and the laminæ in the order of their succession, commas being interposed between each.

† One parcel contains fourteen similar calculi.

‡ The bottle contains many similar.

§ One parcel contains three calculi.

‖ One parcel contains several, apparently from the prostate.

The proportion between the different species of calculi, with reference to the whole number, is as follows:—

In Windmill-street collection.

Uric acid, nearly	$\frac{1}{3}$	of the whole,
Cystic oxide	$\frac{2}{95}$	—
Oxalate of lime	$\frac{1}{19}$	—
Phosphate, rather above .	$\frac{1}{5}$	—
Alternating, rather above .	$\frac{1}{4}$	—
Mixed, nearly	$\frac{1}{8}$	—

Twenty-one of the calculi were entirely free from uric acid, being almost one-fourth; a much greater proportion than is usual, as far at least as we may judge from the published accounts.

Thirty-one, or nearly one-third, contain oxalate of lime in a notable proportion.

In Mr. Cross's collection.

Uric acid, nearly	$\frac{1}{2}$	of the whole,
Oxalate of lime	$\frac{1}{39}$	—
Phosphates	$\frac{1}{39}$	—
Alternating, nearly . . .	$\frac{2}{5}$	—
Mixed, about	$\frac{1}{10}$	—

Only two calculi, or about one-twentieth, were free from uric acid; and nearly one-half contain oxalate of lime, being seventeen in number.

In the collection at Canterbury.

Uric acid, nearly	$\frac{1}{3}$	of the whole,
Oxalate of lime	$\frac{1}{33}$	—
Phosphates	$\frac{1}{33}$	—
Alternating, more than . .	$\frac{1}{2}$	—
Mixed	$\frac{1}{11}$	—

Three calculi in this collection were found without uric acid, being just one-eleventh; and nearly one-half contained oxalate of lime, being sixteen.

In this collection is a very singular instance of a return to the oxalic deposit, after it has been suspended by the phosphatic diathesis. It is to be regretted that the particulars of the case are not known.

Taking the calculi in the three collections under one point of view, they appear thus:—

Uric acid, about	$\frac{1}{3}$,	being 56,
Cystic oxide, about . . .	$\frac{1}{83}$,	being 2,
Oxalate of lime, about . .	$\frac{1}{24}$,	being 7,
Phosphates, about	$\frac{2}{15}$,	being 22,
Alternating, rather more than	$\frac{1}{3}$,	being 60,
Mixed, about	$\frac{1}{9}$,	being 18,
Carbonate of lime, about . .	$\frac{1}{83}$,	being 2,
		167

Only twenty-six, or about one-sixth of the whole number, were free from uric acid; and sixty-four (about two-fifths) contained oxalate of lime.

By referring to the above table, it will be at once seen that the mixture of uric acid and phosphates, so far from never occurring, is, on the contrary, by no means rare; many specimens being either composed of this mixture, or containing laminæ in which it exists. Dr. Prout, however, with whom I have conversed on this point, suggests the probability of ammonia existing in combination with the uric acid in these cases.

RHEUMATIC OPHTHALMIA.

Practical Observations on Rheumatic Ophthalmia; with Cases. By WILLIAM MACKENZIE, Andersonian Professor of Anatomy and Surgery, and one of the Surgeons to the GLASGOW EYE INFIRMARY.

IN a former paper,* I stated that the three inflammatory diseases of the eye, which most frequently arise in adults from atmospheric influences, were the *catarrhal*, the *rheumatic*, and the *catarrho-rheumatic*; and I gave some account of the first of these ophthalmiæ, and of the method of treatment.

I now proceed to the Rheumatic, of which the following particulars are sufficiently diagnostic.

1. *Seat of the disease.*—The catarrhal ophthalmia is an affection of the conjunctiva: the rheumatic has its seat in the albuginea, sclerotica, and periosteum within and round the orbit.

2. *Redness.*—The redness in the catarrhal is reticular, and the turgid vessels are evidently conjunctival: in the rheumatic, the chief redness is zonular, and seated under the conjunctiva.

3. *Nature of the inflammation.*—The catarrhal is an inflammation of a mucous membrane, and is a blenorrhœal or profluvial disease, attended with an increased and morbid secretion of mucus: the rheumatic attacks the fibrous membranes of the organ of vision, and is unattended by any morbid secretion.

4. *Pain.*—The pain in the catarrhal ophthalmia arises on the surface of the conjunctiva, is compared to the sensation of roughness, or to the feeling which might be excited by sand or broken glass under the eyelids; does not extend to the head; and is felt most in the morning, or when the eyes

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begin to be moved: the pain of the eyes in the rheumatic ophthalmia is pulsative and deep-seated; the chief pain, however, is not in the eye, but round the orbit, in the eyebrow, temple, cheek, and side of the nose, and is severely aggravated from sunset till morning.

Degree of frequency.—The pure rheumatic ophthalmia is comparatively a rare disease. For one case of pure rheumatic, we may meet with perhaps ten cases of catarrhal ophthalmia, and six of that mixed disease called catarrho-rheumatic, in which both conjunctiva and sclerotica are affected, and the symptoms of the two former ophthalmiæ combined.

Exciting causes.—Rheumatic ophthalmia may be distinctly traced, in most instances, to exposure of the eye to a continued blast of cold air, while the head and face are in a state of perspiration. The patient, in the history which he gives of his case, commonly mentions some particular exposure of this sort, soon after which the redness and rheumatic pain commenced: for example, sleeping with the head exposed to the air entering by a chink of the wall, or by a broken pane of glass; travelling during the night, with one side of the head close to the broken window of a carriage; suddenly issuing from a crowded room into the cold air of the street; exposure to the blast which flows from the stage into the body of a theatre; keeping wet clothes on the head when overheated.

I have not observed that this disease is much more apt to occur at one season of the year than another. It is certainly much more apt to attack persons in middle life, than either the young or the old. Indeed, I have never seen it in children, nor in those far advanced in life. Probably the same exciting causes which, in persons of middle life and robust constitution, are apt to induce rheumatic ophthalmia, would in a child excite catarrhal or pustular ophthalmia, and in an old person the catarrho-rheumatic. Rheumatic ophthalmia is very apt to re-attack an individual who has already suffered from it on a previous occasion.

The mode of distribution of the inflamed vessels in rheumatic ophthalmia has been very correctly represented by Mr. Wardrop in the Medico-Chirurgical Transactions, Vol. X. Plate I. The fasciculi of vessels which advance in radii to the edge, and sometimes even a little over the edge of the cornea, are larger and more turgid than the radiating vessels seen in iritis, and seem more on the surface of the sclerotica.

In general, there is no tendency to chemosis in the pure rheumatic ophthalmia, nor do the eyelids take part in the disease.

Dimness of vision uniformly attends this disease, depending on an accompanying haziness of the cornea and pupil, attended by slight contraction of the pupil and sluggishness in the movements of the iris. If only one eye is affected, which is generally the case, (at least for some time,) the pupil of that eye is seen at once to be less than that of the sound eye. The iris becomes even slightly discoloured; it becomes greenish, for instance, if naturally blue; and the attending iritis may even go on to evident effusion of coagulable lymph within the pupil. It must be understood, however, that a severe degree of iritis rarely attends this rheumatic sclerotitis.

Except haziness of the cornea and of the pupil, which may be attributed to slight effusion, it has never happened to me to witness any other of the secondary phenomena of inflammation in pure rheumatic ophthalmia. I have not seen the disease terminate in any form of suppuration or of ulceration, both of which are very common in the catarrho-rheumatic ophthalmia.

The access of light does not in general prove very distressing to the patient in rheumatic ophthalmia. The affected eye feels dry and hot in the early period of the disease; but after a time, especially after the symptoms are somewhat abated by blood-letting, there is considerable epiphora.

The pain which attends the rheumatic ophthalmia at its commencement is of a stinging kind, and extends from the eyeball to the whole region of the orbit. It is strikingly augmented by warmth. It often affects the forehead, the cheek-bone, and the teeth; extending sometimes even to the lower jaw. Occasionally it is precisely confined to one half of the head. In some instances it is severe on the side, or even in the cavity, of the nose, or in the ear. But, above all, the eyebrow, cheek, and temple, are its chief seats.

The pain is not unfrequently the acute pulsatory pain of phlegmon; in other cases it consists rather in an agonising kind of feeling, which distresses and wearies out the patience of the person affected. It never ceases entirely, so long as the disease continues; but it varies much in degree, coming on with severity about four, six, or eight o'clock in the evening, continuing during the night, becoming most severe about midnight, and abating towards morning; till then totally preventing sleep, and occasioning great distress. The patient never fails, in the history he gives of his case, to insist on the nocturnal pain, and with his finger to describe and point out its circum-orbital seat. It is much more in the forehead, temple, cheek, and side of the nose, than in the eye.

Mr. Wardrop appears to be inclined to explain the peculiarity of the pain in this disease, from the sympathy which the sclerotica has with the adjacent structures of the same nature. Perhaps, we ought rather to conclude that the periosteum round the orbit, and the fascia of the temporal muscle, (similar structures to the sclerotica,) have become affected at the same time, in a similar way, and from the same exciting cause.

Constitutional symptoms.—Symptomatic fever accompanies this disease, increasing along with the nocturnal paroxysm of pain. The pulse becomes frequent, and sometimes strong, full, and hard. The tongue is white and furred, and the mouth ill-tasted; there is more or less nausea, and the skin is hot and dry. The digestive organs are deranged, the appetite impaired, the bowels confined, and the excretions morbid.

The progress and severity of the disease vary much in different cases. In some, the attack is very slight, and soon goes off, without permanently injuring the organ. At other times, it is extremely severe, continues long, and, if misunderstood, may ultimately destroy the eye. Not unfrequently, the disease falls into a chronic state, without being very severe.

The best description of this disease which I have met with, is unquestionably that by Mr. Wardrop; but as I have attempted to gather the symptoms from a minute examination of the cases which have fallen under my care, I have ventured to differ, both from Mr. Wardrop and from Professor Beer, in several particulars.

TREATMENT.

1. *Blood-letting.*—In plethoric persons, with a full and hard pulse,—indeed almost always in rheumatic ophthalmia,—it is necessary to take away blood from the arm, and to apply leeches to the temple. I feel myself obliged entirely to differ from Mr. Wardrop, in his opinion that patients affected with rheumatic ophthalmia neither bear bleeding to a great extent, nor are alleviated by this remedy. Mr. Wardrop has even stated the little relief afforded by bleeding in this disease, as one of its diagnositic characters. This entirely disagrees with my experience, and is, I apprehend, altogether contrary to what we observe in other rheumatic affections. Bleeding, both general and local, I have uniformly found extremely useful in rheumatic ophthalmia, and

I believe it ought to be employed in almost every case. The first night after taking fifteen or twenty ounces of blood from the arm, the patient is generally so much relieved as to get some sleep, even though no other remedy be employed. Next day, I am in the habit of applying a dozen of leeches to the temple; but, if the pulse be still strong and full, and the circum-orbital pain not relieved, I first repeat the venesection. I regard blood-letting as of the most urgent necessity in this disease: in no species of ophthalmia is this remedy so necessary, or so remarkable in its good effects.

2. *Calomel and Opium.*—In rheumatic ophthalmia, I have never failed to find this combination highly useful, in checking the circum-orbital pain, restoring the digestive system to its healthy state, exciting the skin, and dissipating the redness of the eye. Two grains of calomel, with one of opium, are to be continued every evening till the gums begin to be affected, when the calomel may be omitted, and ten grains of Dover's powder substituted in place of the opium. Mr. Wardrop states that mercury, when given in this disease so as to produce ptyalism, aggravates more than mitigates the symptoms. This does not correspond with what I have observed. I do not, indeed, push the mercury in order to affect the mouth, but I have not witnessed any bad effects from the mouth becoming sore.

3. *Opiate Frictions.*—The patient experiences great relief from carefully rubbing the forehead around the orbit with warm laudanum. BEER used opium moistened with saliva. Friction with either of these substances assuages the pain, if already present; but ought rather to be employed about an hour before the nocturnal paroxysm is expected, which it will greatly lessen, and sometimes entirely prevent. In chronic cases, equal parts of laudanum and tincture of cantharides may be used for this purpose.

4. *Blisters,* repeatedly applied behind the ear, and to the temple, but above all a large blister to the nape of the neck, will be found useful.

5. *Vinum Opii.*—Applications to the eye itself have but little power over this disease. Those which are so useful in other ophthalmiæ, are often hurtful in the rheumatic. The lunar-caustic drops, for instance, which may be regarded as specific in catarrhal ophthalmia, are in the present disease decidedly injurious. When all the febrile and painful symptoms, however, are gone, and little more than lingering redness with weakness of the eye remains, the vinum opii in a diluted state will be found beneficial, dropped upon the eye twice or thrice, or the pure vinum opii once, a-day.

6. *Belladonna.*—During the whole course of rheumatic ophthalmia, the pupil of the affected eye ought to be kept under the influence of belladonna, either by smearing the moistened extract over the eyebrow and eyelids every evening at bedtime, or by infusing one drachm of the extract in each ounce of the laudanum which is used for rubbing the head.

7. *Purgatives.*—A laxative glyster every morning, or a small dose of Epsom salts, may be given to obviate the constipating effects of the opium.

8. *Sudorifics.*—The warm pediluvium at bedtime, with warm diluent drinks towards evening, operating along with the opium, will in general sufficiently fulfil this purpose. Mr. Wardrop recommends antimonial powder, and Beer employed guaiac, for exciting the skin in this disease.

9. *Tonics.*—Small doses of cinchona, or of the mineral acids, will be found advantageous in the chronic stage of the disease, and during convalescence. In old mistreated cases, Fowler's solution gives great relief, in doses of from eight to twelve drops thrice a-day.

The first, second, third, and sixth of the remedies now enumerated, are to be had recourse to in the first instance. I have never seen these remedies fail in any acute case, however severe. Nor have I seen any permanent sequelæ left, when the disease was treated with bleeding, calomel, and opium, opiate friction, blisters, vinum opii, and belladonna.

CASES.

Not to load your pages with unnecessary repetitions and details, (which I am afraid your readers will accuse me of, on a former occasion,) I shall content myself with selecting three cases of rheumatic ophthalmia from the journals of the Glasgow Eye Infirmary.

CASE I.—June 10th, 1825; Isabella Gall, aged thirty-five. For the last twelve days, dimness of the sight of the left eye, redness of the conjunctiva, and particularly of the sclerotica; the vessels running in radii a little over the edge of the cornea. Severe pain in the eye, with hemicrania, much aggravated from twelve at night till five in the morning. Slight nebula of the cornea, and sluggishness in the motions of the iris. Attributes the complaint to exposure to cold.

Mitt. sanguis e brachio ad ℥ xij. vel. xv.—Hirudines viij. temp. sinistr. cras mane.—Belladonna ad palpebr. sinistr.—℞. Subm. Hydr. gr. v.; Pulv. Jalap. gr. xv. M. cap. q. p.

13th.—Pain of the head and of the eye much relieved, and the zonular redness less. An attack of pain from half-past four till six this morning.

℞. Subm. Hydr. gr. ij.; Opii gr. ss. M. fiant tales doses vj. cap. j. m. et v. —Vesicat. pone aurem sinistram.

15th.—An attack of pain this morning from six to seven.
Repetantur hirudines.

17th.—Symptoms greatly abated.
Cont^r Pulvis Subm. Hydr. et Opii, m. et v.

22d.—Rather more pain in the eye.
℞. Subm. Hydr. gr. ij.; Opii gr. j. M. fiant tales doses vj. cap. j. m. et v.—Vesicat. temp. sinistro.

24th.—Instill. gtt. Vini Opii oculo sinistro.

29th.—Occasional attacks of pain deep in the eye.
Repetat. vesicatorium.—Cap. Pulv. Ipecacuan et Opii ℈j. horâ somni.

July 6th.—Dismissed cured.

Case II.—July 6th, 1825; John Martin, aged thirty. Severe ophthalmia rheumatica of the right eye, of eight days' standing. The redness of the conjunctiva and sclerotica is very considerable; the pain in the eye acute; cornea nebulous, and vision very dim. Severe pain in the night; pulse eighty-four, strong.
Venesectio ad ℥ xx.—℞. Subm. Hydr. gr. v.; Pulv. Jalap. gr. xv. M. cap. statim.

7th.—Symptoms not abated.
Repetatur venesectio.—Hirudines xij. temp. dextr.—Sulph. Magnesiæ ℥ ij.—Perfric^r regio frontalis Tr. Opii bis indies.

8th.—Pain of the eye somewhat relieved.
Vesicat. magnum ad nucham, et postea Unguent. Pulv. Cantharidis.—H. s. Pulv. Ipecac. et Opii ℈j.

10th.—Eye and temple much easier since twelve o'clock last night. Redness not diminished, and dimness of the cornea increased. No stool.
Repetatur Pulvis purgans statim.—Belladonna palp. dextr.—Cont. Pulv. Ipecac. et Opii h. s.

11th.—Redness a little diminished; cornea clearer, and vision not so dim. Eye continues easier, but there is more epiphora. Perspires freely through the night. Three stools from the powder and some salts which he took this morning.
Contin^r Belladonna et Pulv. Ipecac. et Opii.

13th.—Symptoms much abated.
Hab. Pil. Colocynth. comp. ij. o. n.—Cont. Pulv. Doveri.

20th.—Instill. gtt. Vini Opii oculo dextro.

29th.—Symptoms gone, except weakness of the eye.

Case III.—December 30th, 1825; Mary Scott, aged twenty. Rheumatic ophthalmia of three weeks' standing, particularly affecting the left eye, the cornea of which is muddy and vision dim. Severe pulsating pain in the eyes, and severe pain in the supraorbital and temporal regions, from twelve P.M. till seven A.M. Eyes irritable, and they water much. Pupils sluggish in their motions, and the sight irregular. Was affected with a bowel complaint, subsequent to jaundice, at the time when her eyes became affected. Has applied leeches to the eyelids and temples, without relief. Feels chilly through the night.

Venesectio ad ℥ xv. vel xx.—Cras mane Hirudines vj. temp. singulis.—℞. Subm. Hydrarg. gr. ij.; Opii gr. j. M. fiant tales doses vj. capiat j. omni nocte.—Fricetur pars capitis dolens Tr. Opii.—Pediluvium tepidum h. s.

January 2d, 1826.—Pain of the eyes, forehead, and temples much relieved by the venesection, so that the leeches were not applied. Zonular redness of both scleroticæ still considerable, but corneæ not so dim, and vision clearer. Perspired in the night. No noctural pain last night, which she attributes to the rubbing with Tr. Opii.

Cont. pulvis, fricatio, et pediluvium.

4th.—Redness much diminished; corneæ clearer, and vision perfectly distinct.

Cont. medicamenta.

6th.—Symptoms almost entirely gone.

Cont. medicamenta.

9th.*—Redness of the left conjunctiva; left lower eyelid swollen and red.

Instill. gtt. Sol. Nitr. Argent. oculo sinistro.

11th.—Right eye perfectly well. Still a little redness of the left.

Instill. gtt. Vini Opii.

16th.—Catarrhal discharge from the left eye.

Instill. gtt. Sol. Nitr. Argent.—Collyr. Mur. Hydr.—Ung. Præ. Rub. o. n.

18th.—Redness of the left eye less, and catarrhal discharge ceased.

27th.—Dismissed cured.

RUPTURE OF THE URETHRA.

Case of Rupture of the Urethra, without external Wound, occasioned by falling across a Wooden Railing. Treated by Mr. Travers, at St. Thomas's Hospital.

July 15th, 1826.—William Somersby, ætatis sixteen, a lad of healthy appearance, was admitted at ten P.M. with retention of urine, accompanied with severe scalding pain in the perineum, and earnest desire to empty the bladder.

On examination, the bladder was found distended and rather painful, and the perineum much swollen and very tender: from this part the cuticle was partially abraded, as it was also from the inside of both thighs, where ecchymosis to a considerable extent had taken place, producing great discoloration, in which the scrotum and penis participated. The lad walked with much difficulty, bending forward the body and separating the legs, and he complained that this exertion aggravated the pain.

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* In the interval between the 6th and the 9th, this patient, cured of the rheumatic ophthalmia of both eyes, in consequence probably of some new exposure, caught catarrhal ophthalmia of the left eye. This case differs from those which I shall hereafter describe under the name of Catarro-rheumatic, in this respect, that here the catarrhal inflammation succeeded the rheumatic; whereas, in catarrho-rheumatic cases, the conjunctiva and sclerotica are affected simultaneously.

On inquiry, it was ascertained that, at six P.M., while standing on some rails to take down the blinds from a window, his foot slipped, and he fell, the legs crossing the railing, and the whole weight of the body and force of the fall being concentrated upon the perineum. He immediately felt an urgent desire to void urine, but was unable to pass a single drop, and, not having passed water since the morning, the repeated ineffectual attempts produced considerable pain. The swelling and pain in the perineum came on at the same time, and, continuing to increase, he was brought to the hospital; and an attempt was made to introduce a catheter, which however passed no further than the bulb of the urethra, and there appeared to enter a cavity, in which the point readily moved in every direction: during this operation, a small quantity of blood escaped. Mr. TRAVERS was now sent for, who on his arrival repeated the attempt with no better success; and he therefore resolved upon laying open the perineum, and endeavouring to find the continuation of the urethra, as no doubt was now entertained as to the fact of laceration having taken place.

July 16th, at half-past three A.M.—The lad being placed on a table, in the same position as in the operation of lithotomy, a deep incision was made along the line of the raphé of the perineum, and a large quantity of firmly coagulated blood removed. A catheter was then introduced at the glans penis, and the point of the instrument was seen in the wound, surrounded by the torn urethra, which appeared to have been completely divided at the bulb, one-third of its length from its termination in the spongy portion of the urethra. After a short but attentive examination, the continuation of the canal, having a clean cut edge, was found retracted about half an inch, and thrown to the left side. Into the vesical portion a silver female catheter was passed till it entered the bladder, when two pints of clear urine were drawn off. No urine appeared to have escaped previously; nor did a drop pass, notwithstanding the repeated efforts of the patient by Mr. Travers's direction, preparatory to the introduction of the catheter. The female catheter being withdrawn, a gum elastic catheter was introduced along the whole line of the urethra. Simple dressings were then applied to the wound, and retained in position by the T bandage, to which the catheter was attached. The lad was now removed to bed.

Ten A.M.—Has slept one or two hours. Has but little pain. The bladder is not distended, but there is slight tenderness of the hypogastric region on the left side. Neither fæces nor urine have been passed since the operation. The face is flushed; pulse 110, full and firm; tongue white and dry; slight thirst.

℞. Ol. Ricini ℥ ss. statim sumend.; et post duas horas repetend. nisi alvus prius responderit.

Two P.M.—The bowels have been freely relieved, and he has passed half a pint of clear urine, rather high coloured; since which the pulse has become less rapid, and his general appearance more tranquil.

For two days a little urine escaped through the wound, but on the 19th the whole passed through the catheter, and the wound was healthy and granulating. On the 22d, the catheter became partially plugged, and, notwithstanding the injection of warm water, the obstruction daily increased, and by the middle of August none of the urine escaped through it, but took its course principally through the urethra, by the side of the instrument; while a small quantity passed in drops from the wound. The catheter was, however, suffered to remain as a director to the urine, and for the purpose of obtaining a complete re-establishment of the canal of its proper dimension.

In the beginning of September, the bladder becoming rather irritable, and the wound in the perineum painful, the catheter was removed, and found coated and lined with a thick deposit of uric acid, for above two inches from the extremity which had lodged in the bladder. The removal was followed by a little hemorrhage from the urethra, which soon ceased.

September 9th.—The irritability of the bladder has subsided, and the wound is healthy and granulating; nearly one half has cicatrised. Less urine passes through the wound since the removal of the catheter.

October 11th.—The wound has now completely cicatrised, except at a pin's-point opening, through which two or three drops of urine, at the most, escape during the day. The stream of urine from the urethra is as large, and passes as freely, as before the operation.

By the application of lunar caustic to the opening, it healed in a few days; and on October 25th he was discharged.

Case of Laceration of the Urethra without external Wound, occasioned by falling across the edge of a Boat. Treated by Mr. Green, at St. Thomas's Hospital.

August 10th, 1826.—Francis Sawyer, ætatis forty-one, a stout muscular man, of healthy aspect, was admitted with a retention of urine of forty-eight hours' duration, the consequence of an injury to the perineum.

It appeared that, on the evening of August 8th, he was occupied in the chains of a vessel lying off Rotherhithe, when, by some accident, he lost his hold, and fell about six or seven feet, with one leg on each side of the edge of a boat, so that the perineum was severely bruised: considerable swelling and tension were the immediate consequences; but, having passed his urine two or three hours before, he felt no desire to evacuate the bladder.

During the night he slept well, as usual, and was quite easy till the morning of the 9th, when, on attempting to make water, he found that merely a small quantity of blood passed from the urethra, unmixed with urine. The retention continuing, and the desire to void the urine becoming more urgent, in the evening he applied to a surgeon, who attempted to introduce a catheter, but was foiled by the arrest of the instrument at the bulb of the urethra. About half a pint of blood flowed through the catheter. The surgeon then directed the application of twelve leeches and a poultice to the perineum. On August 10th, the urgency was still greater, and the lower part of the abdomen became painful; but his health was not disordered, and he was able to walk three or four hundred yards to consult another surgeon, who applied six leeches. On the evening of the 10th, he was brought to the hospital, when the perineum was found entire, but much swollen and tender to the touch; the penis and scrotum, and the inside of both thighs, discoloured by effused blood; and the bladder evidently much distended, producing considerable pain in the lower part of the abdomen. The desire to empty the bladder was very great, and gave an anxious expression to the countenance; the pulse was but slightly quickened.

Mr. GREEN, after attempting to introduce a catheter without success, (producing only a flow of blood,) directed the patient to be placed in the same posture as in the operation of lithotomy, and then made an incision in the line of the raphé of the perineum, the knife passing into a cell of blood, partly fluid, partly coagulated, extending towards the arch of the pubes. On introducing the catheter from the glans penis, it passed into this cell, protruding with it the ragged edges of the urethra, which was lacerated to the extent of an inch, probably close to the prostate gland, as no difficulty was experienced in passing the catheter on to the bladder. It was also distinctly seen that the triangular ligament was partially lacerated. Three pints of urine, highly tinged with blood, were drawn off, and the silver catheter left in the bladder, and fixed in its situation by a T bandage.

August 11th.—Has passed a comfortable night, and is easy and quite free from pain, excepting the smarting of the wound. Pulse sixty-five, full, soft, and regular; the tongue is foul, and he has slight thirst; the bowels have been moved twice; the urine passes through the catheter in tolerable quantity,—it is, however, mixed with blood: a small portion passes from the wound in the perineum. The tenderness of the abdomen has subsided.

The urine continued to be bloody till the 14th, after which it became natural. The bowels were rather costive, and he was ordered to take Ol. Ricini ℥ss. pro re nata. Some portion of the urine continued to pass by the wound till the 19th, after which the whole passed through the catheter.

August 20th.—The catheter having become partially plugged, it was removed, cleaned, and again introduced. The wound is healing rapidly, the granulations at the bottom having inosculated.

September 4th.—The granulations have filled the wound, and are now on the same level as the perineum. Cicatrisation to some extent has taken place at the extremity of the incision, and the same process is going on at the edges.

As the vessel to which he belonged was on the eve of sailing for Riga, and as the captain was unwilling to go without him, the patient was allowed to leave the hospital; having first exchanged the silver for an elastic gum catheter, which he was directed to wear till the wound was quite healed.

Remarks.—These cases, if not frequent, are not very rare. The treatment is obvious, and such as was employed in the histories above related. When the solution of continuity is complete, and the dissevered extremities are drawn half an inch asunder, some difficulty will be encountered in conveying a tube, whether of metal or elastic gum, into the bladder. In such event, the introduction of the latter instrument with a firm stilet into the vesical portion, and the gradual withdrawment of the stilet, so as to allow of a gentle increase of the curve of the catheter, greatly facilitates its progress into the bladder; a manœuvre which is practised in some other cases with advantage.

A circumstance connected with this accident is worthy of observation. Prominent swelling of the perineum and diffused discoloration are accompanied by an urgent desire, and an actual incapacity, to void the urine. A catheter cautiously introduced, when it reaches the arch of the pubes, gives the surgeon the impression of its being out of the canal, for its point is wholly unsupported, and falls from side to side. On withdrawing the stilet or the catheter, a free hemorrhage follows. The case sufficiently explains itself. But would not the surgeon, who was for the first time called to such a case, naturally enough suppose that the patient did not void his urine at the natural orifice, only because it escaped at the breach? If such were his apprehension, it would presently be removed, since the bladder becomes visibly and painfully distended, and all the symptoms proper to retention are manifested: and such is the case, whether the laceration is partial or amounts to a complete division of the tube. This invariable phenomenon offers a most fortunate escape from the dangerous consequences of a breach of the urethra, which is the result of distention from forcible efforts to pass urine in the case of stricture.

How is the retention to be explained? The interstice of the broken tube is plugged with coagula, and a quantity of fluid blood occupies the surrounding space, and forms a tense tumor in perineo; but this could be no impediment to the escape of the urine from a division or rent of the urethra, if the urine quitted the bladder. After laying open the perineum, and exposing the broken ends of the canal, the patient is quite incapable, by any effort, of expelling a drop of urine. If the bladder be wounded, nothing can prevent the escape of urine; and it is only in such ruptures of the urethra from external violence as are above detailed, that this symptom follows. A spasmodic contraction of the sphincter of the bladder, sympathetic with the injury, is the only satisfactory explanation of it. Retention of urine is among the many morbid sympathies with severe local injury, and in these casualties it is probable, that the default of consent occasioned by the laceration of the muscles ordinarily employed in the function of propelling the urine, is the proximate cause of the spasm. Thus the shock of the injury has the effect of averting a consequence which would tend greatly to aggravate the mischief.

Let us now briefly inquire what are the circumstances in which extravasation happens, and what those are which appear to favour or prevent this formidable consequence. It is almost needless to premise that we use this term not in its strict and literal sense, but as commonly used to imply diffusion through the cellular texture. Urine extravasated spoils and gangrenes all the cellular texture which it pervades. Distention, the stimulant quality of the fluid in its natural state, and its rapid decomposition, all contribute to the change which the cellular texture undergoes when loaded with it, and which is expressed by the French term "pourriture." Deep and extensive incisions, to relieve the integuments and facilitate the casting-off of the sloughs, constitute the principal local treatment. Acute abscess opening by ulceration into the urethra, and rent of the urethral membrane by distention behind a stricture, are the circumstances most frequently productive of extravasation. A breach or false passage, as it is termed, by the unskilful or imprudent use of an instrument, is an occasional but less frequent cause of the same accident. In this latter case, the obliquity of the false passage, and its opposite direction to that of the stream of urine,—the temporary hemorrhage, and obliteration of the breach by a coagulum,—the tendency of elastic structures, forcibly reft asunder, to close and contract when the separating force is withdrawn, and the adhesive process directly superversing, are circumstances which commonly protect the patient from the consequence of extravasation. But, in the case of rent or loss of substance from the process of ulceration, the ordinary cause of extravasation, the escape of urine is facilitated by its position on the bladder side of the stricture, as well as other circumstances of the breach. Much probably depends on the situation of the breach, in whatever way occasioned, not only as regards the stricture, but as regards the canal. A rupture of the membranous portion,—i. e. between the apex of the prostate gland and the bulb, (the commonest seat of stricture,) is more favourable to extravasation than a rupture of the prostatic or spongy portion of the urethra; and a rupture of that portion of the latter to which the septum scroti is attached, than of that which is anterior to the scrotum. The follicles and lacunæ of the prostatic urethra are subject to become dilated in old and firm strictures into pouches, having a valvular obliquity, under the pressure of an habitually loaded bladder and frequent forcible strainings: these rend, and suffer the urine to insinuate itself by little and little, and separate the membrane from its bed; and thus the diverticulum, becoming larger than the natural passage, yields to a protracted effort, and determines with apparent suddenness the result of extravasation. Now, from a pretty large experience of these cases we should say, that they are much more frequent among intemperate persons, who, having obstinate strictures, are neglectful of them, who occupy several minutes in passing a wire stream or dribbling drops of urine with extraordinary effort, and whose bladders become thickened and diminished in capacity,—than in persons who attempt to control the disease, and resolutely subject themselves to the use of instruments for comfort's sake, with all the hazard attached to their use indiscriminately.

The case of dilatation and rent or crevice behind the stricture, is unquestionably a more common origin of extravasation than that of abscess, acute or chronic, or false passage by instruments. Attentive observers must have remarked that persons who have fistulæ in perineo, or the vestiges of them, are comparatively seldom the subjects of extravasation of urine. The reason for this is self-evident. Fistula in perineo is nature's contrivance (sometimes, perhaps, a little aided by art,) for relieving the bladder suffering from a long existing permanent stricture. It is the ultimate state of a circumscribed abscess from chronic inflammation and condensation of the cellular tissue surrounding the strictured part. It is a false passage formed gradually, and therefore safely, upon the well-known principle in the animal economy, of thickening without, consentaneous to thinning within. The tendency of stricture to induce chronic inflammation and abscess in the surrounding texture, is universal throughout the canals of the body. The inflammation, condensation, induration, even to callosity, of the cellular membrane, and at length its suppuration, are distinct stages. Thus it happens in stricture of the intestine, both within and without the peritoneum,—of the œsophagus,—of the pylorus,—of the lacrymal and salivary ducts and ureters. Where the canal lies near the external surface, the abscess opens upon it, and gives relief, or avoids a fatal issue, by forming a fistula, or conduit for the delivery of the contents, whether secretory or excretory. When this is not the case, extravasation takes place into cavities or into the cellular substance, and in some of these instances proves fatal.

To conclude, then. Extravasation follows abscess opening into the urethra, or rent of the attenuated lining membrane in the expelling efforts, or extensive laceration of the canal by a wrong direction and violent use of instruments, when the provisional processes against extravasation are anticipated in point of time, or, if they exist, are insufficient. Chronic inflammation and circumscribed abscess are such processes, by the fistula thence resulting; and it may be added, that it is not occasional or absolute, so much as habitual and partial, but increasing retention, which leads to either termination.

Such are the pathological circumstances influencing the result of extravasation of urine. The mechanical are, shortly, the freedom or otherwise of the external opening, the direct or oblique course, and the backward or forward obliquity of the wound. In lithotomy, and bold incisions in perineo for the relief of the bladder, we incur no such risk; but a short wound of the urethra through the raphé scroti is followed by extravasation.

Another question of some interest, connected with these cases, is, whether the sexual act is impaired after a complete transverse division of the corpus spongiosum and urethra? and, if so, in what manner and degree? And this question is interesting in reference to operations upon the prostatic urethra and neck of the bladder, and especially that of lithotomy. This we must defer until another opportunity.

STRANGULATED HERNIA.

Case of Strangulated Oblique Inguinal Hernia, in which several of the Diagnostic Signs were wanting; with Clinical Remarks. Treated by Mr. TYRRELL, at ST. THOMAS's HOSPITAL.

DECEMBER 5th, 1826.—William Poole, ætatis twenty, of athletic appearance, by trade a chimney-sweeper, accustomed to carry heavy weights, was admitted about six P.M. with an inflamed tumor in the right groin and scrotum. He stated that he had been the subject of hernia eight years, but had never worn a truss; that he had occasionally suffered attacks of pain in the tumor, attended with confinement of the bowels, which symptoms had always been speedily relieved by taking a little brandy and some aperient pills. Since Friday last the bowels have not been evacuated, and on Saturday (2d) he was seized with pain in the tumor. The following morning, irritability of the stomach ensued, which continued up to the time of his admission, notwithstanding the employment of the remedies which had on former occasions afforded him relief.

To-day, when admitted, the tumor was tense, painful, and tender, but not œdematous; the scrotal surface red and shining, and at the lower part slight fluctuation was perceptible. The swelling did not increase immediately after leaving the external abdominal ring, but a space of about one inch intervened between the ring and the tumor. This space, and also the inguinal canal as high as the internal ring, were hard and incompressible, and did not dilate on coughing. The patient vomited very frequently, with scarcely any effort whatever, and complained of tightness across the abdomen; which was, however, neither very tense nor very tender. The pulse was about 100, small, but without the threadiness usually attendant on peritoneal inflammation. By direction of the dresser, he was placed in a warm bath, and, becoming faint, the taxis was attempted, but without avail. Mr. TYRRELL was now sent for, who, after an attentive consideration of the symptoms and of the appearance of the tumor, thought that it more resembled inflammation of the testicle than strangulated hernia; and that the irritability of the stomach was the consequence of its sympathy with the inflammation of that organ. This opinion was strengthened by the concurrence of Mr. CALLOWAY, who was invited to see the case. As apparent fluctuation existed at the lower part of the tumor, a puncture was made through the integument in that situation, which was followed only by a discharge of blood. As the symptoms were not urgent, it was then resolved to wait a few hours, and to endeavour to procure an evacuation from the bowels, which, if freely obtained, would disprove the existence of hernia.

A Castor-oil Enema was administered between seven and eight P.M. and repeated after two hours.—Applic^{r} Hirudines xx. abdomini et postea Fotus Papav. et Catap. Lini.

Twelve P.M.—Mr. Tyrrell, accompanied by Mr. Calloway, again visited the patient, and found him labouring under the same symptoms, without any aggravation. No evacuation had taken place; the countenance was not anxious, and there was no hiccough, but the vomiting continued: the ejected matter was offensive, but had no fœcal odour. An operation was now resolved upon, in order to determine the precise nature of the tumor, and, if hernia actually existed, to relieve the bowel from strangulation.

Dec. 6th, one A.M.—Mr. Tyrrell made an incision through the integuments and superficial fascia, beginning just above the external ring, and extending to the bottom of the scrotum. The cremaster muscle, much thickened, was now exposed, and, on endeavouring to raise it up, it was found to be firmly adherent to the part beneath: an opening was however made, and the muscle slit up on a director, when a hernial sac was exposed. On opening this sac, three or four drachms of serum escaped; proving that the puncture made last evening had merely penetrated the integuments. The other contents of the sac consisted of dark-coloured gangrenous omentum, and about four inches of the small intestines, of a dark chocolate colour, but not in a state of gangrene. On examination, a stricture was found at the external ring, which was divided; and, on passing the finger into the inguinal canal, another band of stricture was discovered, after the division of which the finger was again stopped at the internal ring: this was also freely divided. The omentum and the intestine were then ascertained to be adherent to the sac in the whole inguinal canal. After carefully separating the adhesions, the intestine was examined, when a gangrenous spot was perceived on the upper and lower portions at the point of stricture; not, however, so soft as to yield to moderate pressure. Conjecturing that the superior and internal portion communicated with the stomach, an opening was made into it, when some fluid buff-coloured matter escaped. The omentum was then removed by the knife: no bleeding ensued, the vessels being filled with coagulated blood. The intestine was left in the wound, over which a poultice was applied. As the irritability of the stomach continued, the following mixture was ordered:

℞. Magnes. Sulph. ʒiij.; Aquæ Menth. Pip. ℥jss.; Tr. Opii gtt. v. M. tertiâ quâque horâ sumend.

Six A.M.—The pulse has risen, and is harder; the vomiting continues; the discharge from the wound is free.

℞. Cal. gr. iij.; P. Opii gr. j. M. statim sumend.—V.S. ad ℥xij.

After the abstraction of this quantity of blood, he became faint, and no more could be obtained. The blood exhibited the buffy coat.

Noon.—The rectum not having been relieved by the former injection, the following was ordered to be administered immediately:—

Enema Coloc. C.—Adde Mist. Tr. Opii gtt. v. (ut sumantur gtt. x.)

About twenty minutes after administering the enema, an evacuation took place, and after a few hours a second.

Vespere.—The pulse is rather sharp: the vomiting continues. Omit the former medicines, and take the following:

> ℞. Mist. Efferv.; Tr. Opii gtt. xv. M. statim sumend. et post horas duas repetend.—℞. Cal., P. Opii, āā gr. j. M. hâc nocte sumend.—V.S. ad ℥ viij. statim.

The blood drawn this evening was not so much buffed as the former. The patient has been dosing throughout the day.

Dec. 7th, mane.—He continues in much the same state as yesterday: the discharge from the groin is copious, rendering necessary the frequent renewal of the poultice. The vomiting does not recur so often, but this symptom appears to subside more from weakness than from any other cause.

> Beef-tea ℔j. pro enemate.—℞. Cal., P. Opii āā gr. ss. M. secunda quâque horâ.—Rep^r Mist. Efferv. p. r. n.

Vespere.—Pulse 104, small and sharp; abdomen neither tense nor tender.

> V.S. e brachio ad ℥ iv.

During the abstraction of the blood, the pulse lost its sharpness. As the vomiting continues, substitute weak brandy and water for the Mist. Efferv.

8th.—Pulse 108, small and feeble. The vomiting continues, but is rather less frequent; the countenance is pallid, and the eyes rather sunk. He makes scarcely any complaint, and lies in a half-comatose state, from which he is easily roused, and answers questions with tolerable readiness. He continued gradually to sink, with hardly any alteration of the symptoms. Arrow-root, and eggs, and brandy, were administered at short intervals, which remained on the stomach about twenty minutes. As he regularly and progressively became more feeble, without an effort to rally, it was thought that probably the strangulated intestine was a portion of the jejunum, and that consequently no sufficient length of surface remained from which absorption of nutriment could take place adequate to the support of the system. Under this impression, one pound of beef-tea was injected into the rectum this evening.

> ℞. Pil. Cal. cum Opio hâc nocte sumend.

Dec. 9th.—Has continued to sink gradually, notwithstanding the administration of stimulants and nutritive enemata. Vomiting occurs at intervals of about two hours; pulse 110, small and feeble. He is perfectly sensible.

> ℞. Jusculi Bovini ℔ss.; Vini rubri ℥ ij.; Tr. Opii m. xv. M. fiat enema statim injiciendum et quartâ quâque horâ repetend.

At half-past ten P.M. he expired.

Thirteen hours after death, the body was examined by Mr. Tyrrell and Mr. Calloway, in the presence of a number of students.

The protruded intestine, of a dark leaden colour, adhered firmly to the lower three-fourths of the internal ring: it was perfectly free from stricture, and the finger could be readily passed from the opening of the intestine in the sac, into either the upper or lower portions of the canal in the abdomen. There was considerable thickening of the scrotum over the right testicle, which was slightly enlarged and indurated. On opening the abdomen, not a tea-spoonful of serum could be perceived in its cavity, and the peritoneum lining the parietes was quite pale and transparent. The ileum, at about the distance of a foot from its termination in the cœcum, was protruded through the internal ring, having on its inner side the epigastric artery. The peritoneal coat of this bowel exhibited an inflammatory blush, and, for about an inch and a half above the internal ring, the upper and lower portions were united at an acute angle by a thin layer of adhesive matter, which readily gave way on the application of very slight force. On opening the intestine, its mucous coat exhibited marks of acute inflammation, which extended into the colon and to a considerable distance up the ileum, the upper portion of the ileum and the jejunum being uninflamed. The contents of the small intestines were buff-coloured, of a pappy consistence, similar to the discharge from the groin. The colon was contracted, and contained a very small quantity of black softened fæces. The gall-bladder was full of greenish bile. The other viscera presented no peculiarity.

In a clinical lecture, delivered December 11th, Mr. Tyrrell made some observations, of which the following is the substance.

From such a case as the preceding, much more valuable information is to be derived, than from a number of cases in which the parts present the usual appearances, and in which the operation has been followed by the ordinary symptoms, and terminated favourably. At first I was induced to believe that the patient was not suffering from strangulated hernia. He had a sense of tightness across the abdomen, with vomiting, and the pulse was more frequent than natural, but it had neither the sharpness nor hardness indicating peritoneal inflammation; neither was there much tension nor tenderness of the abdomen, nor any anxiety of countenance. The tumor in the groin had not the usual appearances of hernia, but all those of common inflammation of the testicle. In hernia, the intestine usually forms a swelling immediately after passing the external ring, in consequence of the laxity of the parts permitting distention; but in this case there was a tumor at the lower part of the scrotum, and between this and the external ring intervened a space of one inch, which was occupied by an indurated mass extending as high as the internal ring, which are precisely the appearances of an ordinary inflammation of the testicle; this viscus forming the tumor, and the thickened vas deferens and spermatic cord the indurated mass between the tumor and the internal ring.

Vomiting is also a very frequent symptom of this inflammation, from the intimate sympathy between the stomach and testicle.

Under these circumstances, no mischief could ensue from waiting a few hours, till time had thrown more light on the nature of the case. If the bowels had been freely relieved by the enema administered in the interval, the existence of hernia would have been at once disproved; and, if the symptoms continued and hernia existed, the shortness of time could not make any material difference, as the want of severity in the symptoms would lead to the belief that the intestine had not sustained any serious injury. On visiting the patient at twelve P.M. and finding the symptoms, though not aggravated, yet remaining unabated, the operation was performed, to remove all doubt; and though, at the time of commencing it, I was not satisfied that the tumor was a hernia, yet I was conscious of doing right.

The remarkable appearances found in the operation were, the firm adhesion of the cremaster to the hernial sac, requiring considerable force to effect the passage of the director between them. On opening the sac, the omentum was in a state of gangrene, and would in a short time have sloughed off; it was therefore removed. The strictures, too, were peculiar: usually we find the stricture formed at the internal ring, but here were three distinct bands in the inguinal canal, each requiring to be divided. The adhesions between the sac, the intestine, and the omentum in the inguinal canal, are also worthy of notice; and, after separating these, the gangrenous spots were seen.

Some difference of opinion exists as to what course should be pursued in such cases: whether or not the whole should be left to the operations of nature. If the stricture be allowed to remain, the symptoms will continue till an opening in the intestine has been formed by gangrene; and, if we divide the stricture and intestine, we merely do that which nature would subsequently have effected, and by such a proceeding save invaluable time to the patient. This plan was therefore adopted.

After the operation, the Magnesiæ Sulph. in Aquæ Menth. Pip. was administered, as this is usually found to relieve the irritability of the stomach; and afterwards the colocynth enema was ordered, because the former enema had not been returned, and though there was a free discharge from the upper portion of the intestines, yet the distention of the colon might tend to keep up irritation. In the evening of the 7th, the bleeding was repeated, in order to guard against peritoneal inflammation, which occasionally takes place; and although the abdomen did not exhibit the symptoms of peritonitis, yet the pulse did.

At the time of the operation, it was impossible to ascertain what intestine was strangulated, whether jejunum or ileum; and in this doubt, as the powers of life sunk, it was conjectured as probable that the jejunum was involved, and that the aliment consequently escaped before a sufficient quantity had been absorbed. Beef-tea was therefore injected into the rectum, though less reliance is placed on this measure by practitioners in this country, than by the French and German surgeons. The subsequent treatment was merely the administration of increased nutriment.

The constitutional symptoms throughout this case were peculiar. We are told that, when gangrene exists, hiccough is a principal symptom; and that, in peritonitis, the abdomen is tense and extremely tender, and the pulse hard, sharp, and thready. All these symptoms were wanting in the present instance, and yet the intestine was gangrenous. The regular and progressive sinking was scarcely to be expected from the short interval which had elapsed since the strangulation. Much blood was not abstracted; and yet, at no one period after the symptoms of sinking presented themselves, did the patient's constitution exhibit the slightest disposition to rally. It is true that the vomiting latterly became less frequent, yet this appeared to arise merely from want of power.

From this case we should conclude that, when doubtful symptoms are present, an operation ought to be performed to ascertain the facts; and though in the present instance the termination was fatal, yet it would probably have been much earlier without an operation, and the surgeon would have been deservedly censured.

CRITICAL ANALYSES.

Quæ laudanda forent, et quæ culpanda, vicissim
Illa, prius, cretâ; mox hæc, carbone, *notamus.*—Persius.

An Essay on Morbid Sensibility of the Stomach and Bowels, as the Proximate Cause, or Characteristic Condition, of Indigestion, Nervous Irritability, Mental Despondency, Hypochondriasis, &c. &c. To which are prefixed, Observations on the Diseases and Regimen of Invalids, on their Return from hot and unhealthy Climates. By James Johnson, m.d. of the Royal College of Physicians, &c.—8vo. pp. 128. Thos. and Geo. Underwood, London. 1827.

This Essay is a reprint of the additional matter in the fourth edition of Dr. Johnson's well-known and justly-esteemed work on the "Influence of Tropical Climates on European Constitutions," and is published separately for the convenience of those who may be possessed of a former edition, or who may not be inclined to possess the present one. To both the one and the other of these classes of persons we can conscientiously recommend this useful little work. It contains 128 closely printed pages, and as much matter as some authors, with the help of a large type and wide margin, would have expanded into a goodly octavo. The subject may be easily guessed: it is an old friend (or rather an old enemy) with a new face,—the dyspepsia and hypochondriasis of Cullen,—the deranged digestive organs of Abernethy,—the bilious disorders of one author, and the stomach complaints of another. Dr. Johnson is dissatisfied with all and each of these terms, and he offers the following reasons for adopting a new one:

> "When this combination of gastric and hepatic disorder obtains, whichever may have had the priority, the term 'indigestion' is merely a conventional one, which is meant to designate a complication in which indigestion forms at most but a part—a very small part—and sometimes no part at all. I own that it is very hard for any one but a German to give such a name to this complication as may convey a clear idea of its nature. By the term 'morbid sensibility of the stomach and bowels,' I mean a disordered condition of the gastric and intestinal nerves, in which their natural sensibility is changed, being morbidly acute, morbidly obtuse, (torpid) or perverted. By this term, I merely designate a fact or condition which, in my opinion, obtains much more generally in this class of maladies than the state called indigestion: indeed, I think I may aver that it is never absent in the

functional disorders of the digestive apparatus now under review, and that it forms the connecting link between these disorders and the various sympathetic affections of other and distant parts of the system. This is my apology for the term." (P. 54.)

In a note, the author obviates, and we think very fairly, an objection to his newly-adopted term, which will at once occur to the reader.

> "It may appear an incongruity to consider the organic sensibility of the stomach and bowels as morbidly increased at a time when the latter (the bowels) are generally supposed to be in a state of torpor, as evinced by constipation. But the *organic sensibility* of the bowels may be greatly perverted and exalted, and yet the muscular or peristaltic action irregular, or even torpid. Besides, it is a law of the animal economy, that, when nervous sensibility is too much excited in one part, it is too little so in some other. Thus, we often see the stomach and upper bowels in a state of great irritability, while the lower bowels are quite torpid, and will not propel forward their contents. Gastric irritability and vomiting are usually accompanied by constipation. Finally, I may observe, that the *functions* of the stomach, liver, and intestines, may be *torpid*, while the *organic* sensibility of their nerves may be in a state of morbid excitement." (P. 51.)

Previously, however, to entering upon the subject of morbid sensibility of the stomach and bowels, Dr. Johnson gives us forty pages on the "diseases and regimen of invalids returning from hot and unhealthy climates." We do not exactly see how this bears on the general questions discussed in this essay. The remarks, indeed, are well drawn up, and appear to us to form a valuable—we might say an indispensible—addition to any work professing to treat on the influence of tropical climates on European constitutions; but they have no direct reference to morbid sensibility of the intestinal canal considered abstractedly, and therefore we think them misplaced here. Had they been appended rather than prefixed to the main essay, the abruptness with which the work opens, and which every reader must be struck with, would at least have been avoided.

Among the diseases to which persons who have long resided in hot climates are exposed on their return to England, Dr. Johnson lays particular stress on those of the lungs and liver. Many of his observations on these affections, on their pathology especially and treatment, are sound and practically useful; but we could not forbear remarking a curious distinction which he draws in the diagnosis of diseases of these organs. In animadverting on the work of a contemporary, whose labours in our own department afford us at all times both instruction and example, we would avoid, of course, even the appearance of captious criticism; but there is something in the passage before us which calls for especial notice. We have never disguised our own opinions concerning the value of the French invention, the stethoscope;—Dr. Johnson, on the other hand, is one of its steadiest friends in this or any country. The very mantle of Laennec appears to have fallen upon his shoulders. Let us see, however, how much the possession of this instrument has warped his pathological opinions; and for this purpose let us compare his reasonings concerning the functional and organic diseases of the parts just named, the lungs and the liver.

Speaking of the propriety of distinguishing between the dyspeptic pulmonary affection, in which the mucous membrane is chiefly engaged, and that more advanced stage of pulmonary disorder in which the parenchymatous tissue of the lungs becomes involved, and when, if a scrofulous diathesis be present, tubercles are excited into action, he says—

> "The grand object is to determine the period when *symptomatic disorder* is passing into the state of *actual disease;* and this, I maintain, cannot be done by any investigation of symptoms, however minute, short of exploration of the chest by means of auscultation and percussion. Yet, on this distinction between the two states, the whole question of treatment hinges." (P. 26.)

Further on, he uses these words—

> "Without this investigation, then, we may be too early in our treatment of the pulmonic affection, or too late. The former error is dangerous, but the latter is fatal to the patient. If auscultation were attended with no other advantage than this discrimination of the two stages of dyspeptic phthisis, (a disease so very prevalent in this country,) it would be the most valuable discovery of the present century." (P. 27.)

Let the reader contrast these remarks with some that follow on the diagnosis of functional and organic disease of the liver.

> "I have endeavoured to reduce the diagnosis within its proper, or at all events its practical, limits, and to restrain the vague notions respecting 'liver disease,' which are so prevalent and so detrimental. Indeed, I am convinced that, were the term and the idea of 'organic disease' of the liver obliterated, not only from the nosological chart, but from the minds of practitioners, it would be much better for their patients. No possible danger can accrue from mistaking an organic disease of the liver for a functional one, but much mischief may result from the contrary mistake. This will appear a strange position to be maintained, and is the reverse

of that commonly laid down; but it is not stated without mature reflection. More diseases of structure in the liver would be cured by careful attention to its function, than by all the other means put together." (P. 40.)

Does it not follow from these premises, that, if an instrument should hereafter be discovered, by which the practitioner may be taught to distinguish between a tuberculated and a simply indurated state of liver, or any other chronically diseased condition of that viscus: in short, if an abdominal stethoscope should be discovered by some future Laennec, that such instrument would do more harm than good?

In the sentiments expressed in the following passage we perfectly coincide:

> "The above are the principal changes which the biliary apparatus undergoes during life, and which can only be ascertained by the knife after death. But, it will be asked, 'can we not tell by the symptoms what is the organic change going on?' I venture to assert that we cannot. Since little can be learnt from external examination, in respect to the *kind* of structural disease in the liver, we have only the disorder of function, and its consequences on the constitution, to guide us; and I unhesitatingly aver, that disorder of function in the biliary apparatus is often more considerable where there is no change of structure, than where there is organic disease of great and irremediable magnitude. This is so much the case, that, when I find much functional disturbance in the biliary secretion, and much constitutional derangement resulting thence, I conclude (unless there be tangible enlargement) that the structure of the liver is unaffected in any material degree." (P. 34.)

We come now to explain to our readers the particular views which Dr. Johnson entertains concerning the disordered conditions of the digestive apparatus. Morbid sensibility of the nerves supplying the chylopoietic viscera is, in his view, the essential feature of this class of ailments, and he subdivides the subject into the two heads (or chapters) of Morbid Sensibility of the Stomach and Bowels attended *with* obvious disorder in the digestive organs, and the same *without* any obvious or well-marked symptom of such disorder. This arrangement corresponds very closely with the dyspepsia and hypochondriasis of most authors. In filling up the details, the author writes entirely from personal observation, and, we regret to learn, in a considerable degree also from personal suffering. This at once stamps a high value on the work, and, while perusing the painful catalogue of evils which spring from a disordered stomach, our sympathies with the author are assuaged by the reflection that, with the skill of the alchemist, he has converted the cup of sorrow into the potion of health, and has made individual suffering subservient to public advantage. Dr. Johnson expresses himself with very considerable power of language, and, though the passage is somewhat long, we are tempted to extract the following sketch of "biliary irritation acting on the mental faculties, through the medium of the intestinal nerves," as a very favourable specimen of his style.

> "Severe as this paroxysm is, the patient may thank his stars that the poison vented its fury on the body instead of the mind. Where the intellectual faculties have been much harrassed, and the nervous system weakened, the morbid secretion acts in that direction, and little or no inconvenience is felt in the real seat of the enemy. The mind becomes suddenly overcast, as it were with a cloud; some dreadful imaginary evil seems impending, or some real evil, of trifling importance in itself, is quickly magnified into a terrific form, attended apparently with a train of disastrous consequences, from which the mental eye turns in dismay. The sufferer cannot keep in one position, but paces the room in agitation, giving vent to his fears in doleful soliloquies, or pouring forth his apprehensions in the ears of his friends. If he is from home when this fit comes on, he hastens back; but soon sets out again, in the vain hope of running from his own wretched feelings. If he happen to labour under any chronic complaint at the time, it is immediately converted into an incurable disease, and the distresses of a ruined and orphaned family rush upon his mind and heighten his agonies. He feels his pulse, and finds it intermitting; disease of the heart is threatened, and the doctor is summoned. If he ventures to go to bed, and falls into a slumber, he awakes in the midst of a frightful dream, and dares not again lay his head on the pillow. This state of misery may continue for twenty-four, thirty-six, or forty-eight hours; when a discharge of viscid, acrid bile, in a motion of horrible fetor, dissolves at once the spell by which the strongest mind may be bowed down to the earth, for a time, through the agency of a poisonous secretion on the intestinal nerves! I believe such a train of symptoms seldom obtains except where there has been a predisposition to morbid sensibility, occasioned by mental anxiety, vicissitudes of fortune, disappointments in business, failure of speculations, domestic afflictions, or some of those thousand moral ills which render both mind and body so susceptible of disorder. It is under the influence of such paroxysms as these, I am thoroughly convinced, that nine-tenths of those melancholy instances of suicide which shock the ears of the public take place." (P. 56-7.)

Dr. Johnson offers some very clear, and we think most satisfactory, criticisms upon the views of indigestion taken by Dr. Wilson Philip. After giving his reasons for distrust-ing Dr. Philip's ideas concerning tenderness of the epigastrium, he thus expresses himself regarding the peculiar hardness of the pulse noticed by that author.

"On this subject, I must take the liberty of saying that Dr. Philip appears to have refined to an excessive degree of minuteness. If a physician's whole sense was concentrated in the point of his forefinger, he would hardly be able to follow Dr. Philip in his diagnostic of hardness in a dyspeptic pulse. This hardness is often to be recognised only by 'a particular way' of feeling the pulse. 'If the pressure be gradually lessened till it comes to nothing, it often happens that a distinct hardness of the pulse is felt before the pulse wholly vanishes under the finger, when no hardness can be felt in the usual way of feeling it.' I appeal to the experience of every practitioner, whether such a refinement as the above can be entitled to much confidence in the examination of a phenomenon like the pulse, which varies with almost every emotion or thought that crosses the mind of a dyspeptic invalid. Is it to be assented to, that, by such a criterion as this, we shall be enabled to distinguish irritation from inflammation; or functional from organic disease? The fact is, that, in irritation of the stomach or bowels, the pulse is often as hard and as quick as in inflammation of those parts. The heart is so much under the influence of the stomach, in functional derangement of the latter organ, that no dependence can be placed on the state of the pulse, whether as regards hardness, frequency, or irregularity." (P. 65.)

To the importance and correctness of this last observation we are ready to offer our unqualified testimony. The chief peculiarities of Dr. Johnson's opinions concerning morbid sensibility of the stomach and bowels, are brought under the reader's notice when treating of the causes and management of hypochondriacal disorders. We may thus enumerate them:—Dr. Johnson's first position is, that our food and drink should never produce sensation in the stomach. This he considers as "one of the most fundamental views in pathology, and as leading to one of the most useful precepts in the art of preserving health."

"The moment we call forth conscious sensation in the stomach, whether that be of a pleasurable or a painful kind, we offer a violence to that organ, however slight may be the degree. Whenever the conscious sensibility of the stomach (or, indeed, of any other internal organ,) is excited by any thing we introduce into it,—by any thing generated in it,—or by any influence exercised on it through the medium of any other organ, we rouse one of nature's sentinels, who gives us warning that her salutary laws are violated, or on the point of being violated. Let us view the matter closer. We take an abstemious meal of plain food, without any stimulating drink. Is there any conscious sensation produced thereby in the stomach? I say, no. We feel a slight degree of pleasant sensation throughout the whole frame, especially if we have fasted for some time previously, but no distinct sensation in the stomach. There is not, there ought not to be, any conscious sensibility excited in this organ by the presence of food or drink, in a state of health; so true is the observation, that to feel that we have a stomach at all is no good sign." (P. 45.)

Farther on, he thus reiterates the principle—

> "Any discomfort of body, any irritability or despondency of mind, succeeding food and drink, at the distance of an hour, a day, or even two or three days, may be regarded (other evident causes being absent) as a presumptive proof that the quantity has been too much, or the quality injurious." (P. 75.)

Another peculiarity in Dr. Johnson's views is, that hypochondriasis is, in general, independent of actual dyspepsia.

> "I do maintain that, although hypochondriacal symptoms often attend indigestion, (as indeed I have abundantly shown,) yet indigestion is by no means essential to hypochondriasis. In two patients whom I am now attending, and who are perfect models of hypochondriacism, the appetite is good, the evacuations perfectly natural, and no pain, flatulence, or other symptom of indigestion in the stomach, is complained of. In both these instances, however, the hypochondriasis may, at pleasure, be exasperated or mitigated by free or by abstemious living; shewing that the nerves of the stomach and bowels are concerned in the mental phenomena." (P. 80.)

A little farther on (viz. page 82,) he states that "a morbid sensibility of the nerves of the stomach and bowels is the leading feature of hypochondriasis, and the cause of the varied and endless train of symptoms which develop themselves in the mind and in distant parts of the body. This may exist both with and without the usual symptoms of disordered digestion.

Dr. Johnson's observations on the causes of morbid sensibility of the stomach and bowels are, we think, particularly valuable. He lays stress on the following, and, in our opinion, with the greatest justice:—1, atmospheric variations; 2, errors in diet; 3, mental anxiety. On the important subject of the *moral* causes of stomach complaints, the author expresses himself in the following vigorous manner:

> "In this country, where man's relations with the world around him are multiplied beyond all example in any other country, in consequence of the intensity of interest attached to politics, religion, commerce, literature, and the arts; where the temporal concerns of an immense proportion of the population are in a state of perpetual vacillation; where spiritual affairs excite great anxiety

in the minds of many; and where speculative risks are daily run by all classes, from the disposers of empires in Leadenhall-street, down to the potatoe-merchant of Covent-garden,—it is really astonishing to observe the deleterious influence of these mental perturbations on the functions of the digestive organs. The operation of *physical* causes, numerous as these are, dwindles into complete insignificance, when compared with that of anxiety or tribulation of mind. These causes very often escape the investigation of the physician, unless he is very much on his guard. The patient is prodigal of description, as far as regards his corporeal feelings, and he is often very candid as to the physical causes which may be inquired after by the practitioner; but he seldom reveals (for obvious reasons) the real origin of the evil, when it is of a moral nature, unless it be dexterously drawn from him by artful cross-questioning." (P. 78.)

The most important feature in the work before us still, however, remains to be noticed. It regards the very interesting question of *treatment*, and as, in the sequel, we shall have to express our dissent from the author in some of his practical suggestions, we shall lay the subject before our readers in Dr. Johnson's own words. He says (page 89), "It is on the regulation of diet that our chief hopes of cure must rest. Instead of exhibiting purgatives day after day to carry off diseased secretions, we should lessen and simplify the food, in order to prevent the formation of these bad secretions." But the pith and marrow of the question will be best traced in the following remarks:

"I care not if the dyspeptic invalid begins with a pound of beef-steaks, and a bottle of port wine for his dinner. If he feel as comfortable at the end of two, four, six, eight, or twelve hours after this repast, as he did between breakfast and dinner of the preceding day, he had better continue his regimen, and throw physic to the dogs. But if, a few hours after his dinner, he feel a sense of distention in the stomach and bowels, or any of those symptoms of indigestion which have been pointed out; if he feel a languor of body, or a cloudiness of the mind; if he have a restless night; if he experience a depression of spirits or irritability of temper next morning, his repast has been too much, or improper in kind, and he must reduce and simplify till he come to that quantity and quality of food and drink for dinner, which will produce little or no alteration in his feelings, whether of exhilaration immediately after dinner, or of discomfort some hours after this meal. This is the criterion by which the patient must judge for himself. The scale of diet must be lowered and simplified down to water-gruel, if necessary; otherwise a cure can never be expected." (P. 90.)

Again—

> "I have distinctly said that the invalid may eat and drink as much as he pleases, provided he experience no increase of his morbid feelings from food and drink, within the twenty-four succeeding hours. If he do feel an increase of these, the necessity of the restriction which I propose is self-evident, and, so far from being the imposition of a penance, it is, in reality, the removal of one. Let it be remembered that I am speaking of the dyspeptic stomach, and not of that which is in the enjoyment of all its healthy powers and of all its natural sensibilities. But the invalid may ask, 'Can I not have my ailments removed without abridging my appetites?' No! And the practitioner who undertakes the treatment under such conditions, betrays either a want of principle or a want of judgment." (P. 91.)

We have never suffered, like Dr. Johnson, from dyspeptic complaints, and therefore we are not such good judges of the matter as he is, but we doubt very much whether this *golden* rule, as he calls it, *of restraining the food to that quantity which produces no languor after eating, no unpleasant sensation of mind or body during digestion,* be in reality practicable upon a large scale. We suspect that, in many cases, the almost total withdrawing of nourishment which this plan leads to, would weaken the general system more than the author supposes. Water-gruel is, we allow, a sufficient diet for persons in a fever; but we are disposed to hesitate ere we assent to the following panegyric on the virtues of gruel in *chronic* ailments. "From four ounces of gruel every six hours, a patient will, under many states of indigestion, derive more nutriment and strength than from half a pound of animal food and a pint of wine." (P. 89.) Again he says, "Perhaps, of all species of food, this (gruel) is the least irritating, and, where a high degree of morbid sensibility prevails, it is often the only thing that can be borne." (P. 76.) And, for fear we should forget the fact, he tells us once more, (page 92,)

> "The least irritating, and the most easily digested aliment, is unquestionably farinaceous food, at the head of which we may place good grit gruel. I have known many who could digest only this, without unpleasant sensations in the stomach or other part of the body. When such is the case, the nerves of the stomach are in a high degree of morbid sensibility, and great caution should be taken not to irritate them by attempts at more nutritious food. No person is in danger of starvation who can take a pint,—nay, only half a pint, of good gruel in the twenty-four hours. Arrow-root, sago, tapioca, rice, salep, are all in the same class; but few of them will bear repetition so well as gruel. A little sugar, and a tea-spoonful of brandy, in each cup of the gruel may be permitted, but the brandy may be safely dispensed with in general."

We cannot go into the minutiæ with which our author directs the diet of a dyspeptic invalid. We may state, however, that he is as much an enemy to wine, as he is to the solid delicacies of the table. "My firm conviction is, that, in respect to drink, water is the best; and, till the habit of water-drinking can be acquired, a dilute mixture of brandy and water is the next best beverage." (P. 94.)

We have, then, the strongest assurances given us that this rigid system of diet is not the creature of speculation, but the dictate of experience. We are even told that "those who have persevered in it, and reaped its fruits, will hardly be induced to change it afterwards, however strongly they may be tempted by the luxuries of the table, or the seductions of convivial society."

Dr. Johnson, however, does not discard the use of medicine. He acknowledges that benefit may occasionally be derived from it, especially with the view of expelling and correcting the morbid secretions which are poured into the alimentary canal. The following remarks are excellent:

> "Infinite mischief, as I have stated before, is daily occasioned by the indiscriminate employment of purgative medicine, in dyspeptic complaints. Bad secretions may be thus removed, but their reproduction will never be thus prevented. It is by withdrawing the sources of irritation, and gradually improving the functions of the liver, the stomach, and the intestinal canal, that the formation of morbid secretions can be arrested. Purgation, therefore, should be rarely employed. It may be proper, just at the beginning, to clear the alimentary canal of all its lurking contents; but, after this, I do maintain that the main object is to produce but one evacuation daily, and that of a solid rather than a liquid consistence. If practitioners knew the misery that is often produced by an irritating cathartic medicine in dyspeptic and hypochondriacal complaints, in this country, they would be more sparing than they are of their calomel at night and black draught in the morning." (P. 97.)

A variety of formulæ are then given, applicable as habitual aperients. They are all very complicated, the author believing that in this manner a more complete effect is produced along the line of the digestive apparatus. Where morbid sensibility prevails to any considerable degree, we are advised to join hyoscyamus, or some other gentle anodyne, to the aperient. The efficacy of counter-irritants, especially of a plaster containing the tartarised antimony, of anodynes, and of the tepid bath, is then briefly touched upon. Some valuable observations follow on the employment of bitters and tonics in cases of indigestion, and morbid sensibility of the stomach and bowels. The sulphate of quina, in half-grain doses, is spoken of as very efficacious in cleaning the tongue, improving the appetite, and imparting tone and tranquillity both to mind and body.

Dr. Johnson extols the nitrate of silver as a very valuable remedy in the removal of morbid sensibility of the primæ viæ. He does not, indeed, hold it out as a specific, but contends that it may be often resorted to with a fair prospect of benefit. He considers that the good effects occasionally experienced from this medicine in epilepsy, depends on its power of lessening the sensibility of nerves. It appears to us, however, that the author here writes from theory rather than actual practice. He mentions cases wherein he expects beneficial results, and where the patients are on the point of being cured. The medicine may be given in the dose of half a grain, at bedtime, in combination with any bitter or aperient extract.

The last subject which occupies our author's pen is *travelling*, and its moral and physical effects. On this topic Dr. Johnson is particularly eloquent. In the autumn of 1823, he made the grand tour of Europe, for the sole purpose of health, and the result appears to have exceeded his most sanguine expectations. We have not space for the author's detailed exposition of the effects of travel upon the mental and bodily functions, but we must find room for the following summing-up:

> "These unequivocally good effects of travelling on the digestive organs, account satisfactorily for the various other beneficial influences on the constitution at large. Hence dyspepsia, and the thousand wretched sensations and nervous affections thereon dependent, vanish before persevering exercise in travelling, and new life is imparted to the whole system, mental and corporeal. In short, I am quite positive that the most inveterate dyspepsia (where no organic disease has taken place) would be completely removed, with all its multiform sympathetic torments, by a journey of two thousand miles through Switzerland and Germany, conducted on the principle of combining active with passive exercise in the open air, in such proportions as would suit the individual constitution and the previous habits of life." (P. 124.)

This brings us to the conclusion of the volume,—a volume, we repeat, small in size, but rich in matter, from the perusal of which every reader will derive instruction. The author is laudably content to give us the result only of his personal feelings, and of his reflections upon them; and the extracts which we have given sufficiently attest the value of his contribution to the stock of medical facts. The essay is written throughout in a pleasing, unaffected style. In one passage, indeed, (page 77,) there is an attempt at rhetorical flourish. Speaking of the moral causes of disordered stomach, we are told, " that there is but one path along which they travel from the organ of thought, but the number of these airy sprites, and the velocity with which they glide along the silvery pneumo-gastric conductors, baffle all calculation." This little blemish, if so we may term it, is however amply compensated by many vigorous passages, and by the general tone of good sense and sound reasoning which pervades and characterises the work.

On Galvanism; with Observations on its Chymical Properties and Medical Efficacy in Chronic Diseases, with Practical Illustrations; also, Remarks on some auxiliary Remedies. With Plates. By M. LA BEAUME, Medical Galvanist and Surgeon-Electrician, F.L.S. &c.—12mo. pp. 271. Highley, London, 1826.

THIS volume is obviously intended more for the public than the profession, as it is prefaced by a plate of the " thoracic and abdominal viscera," for those " intelligent readers who may be unacquainted with the anatomy and physiology" of those parts. The author is anxious to separate himself from the " mere mechanical operators of electricity." He " attacks disease at its source by one of the most powerful medical agents that has ever been employed in the curative treatment of human maladies."

The accidental discovery of animal or metallic electricity may not be known to all our readers, and is sufficiently curious to be briefly mentioned. It was first observed by the wife of GALVANI, anatomical professor at Bologna, in 1791.

" Some frogs, recently skinned for cooking, were casually lying on a table near an electrical machine in the laboratory of the professor. After the apparatus was put into action, an attendant unintentionally touched with the point of a scalpel the crural nerves of the frog, that was nearest to the prime conductor, when the muscles of the limb were instantly thrown into strong convulsions. This remarkable circumstance the wife communicated to her husband, who repeated the experiment with the same result; which appeared to confirm the hypothesis he had previously formed, that muscular motion depended on electricity. This ingenious man subsequently made many experiments on frogs, from which he concluded that there is in all animals an inherent electricity, capable of exciting muscular motion on the application of dissimilar metals to different parts of the body. Hence the science of animal or metallic electricity, as well as the fluid, is called after his name. Soon after Galvani had made known his discoveries;

several philosophers, among whom were Valli, Fowler, Fabroni, and others, prosecuted their inquiries into this new phenomenon. Their researches confirmed the important fact, that galvanism possesses a peculiar power in exciting the nerves. Sultzer, a German writer, was the first who noticed the effects which two dissimilar metals have on the tongue, when brought into contact, and which produce a subacid taste. This discovery evinced the influence of the galvanic principle on the gustatory nerves; and, some time after, its effect on the optic nerves, in producing a flash of light, was observed by Fowler. Similar experiments were also made by others with the same results; and this application of two dissimilar metals constitutes the simple galvanic power." (P. 3.)

It may be easily conceived that the spirit of inquiry, and zeal for improvement, led many other individuals to prosecute their investigations upon the subject. Fourcroy, Vauquelin, Tiomsdorf, Biot, Cuvier, &c. &c. have, in foreign countries, contributed much to the advancement of the science of galvanism. In England we have not been idle. To Mr. Cruickshanks, of Woolwich, we are indebted for the galvanic battery, " by which Dr. Henry decomposed the sulphuric and nitric acids, ammonia, &c., and by which Sir Humphry Davy achieved his greatest chemical exploits."

Electricity and galvanism are not unfrequently confounded. The differences between them are—

" First, in their development; secondly, in their state; thirdly, in their action; and, fourthly, in their effects.

" First: The development of the electric fluid is obtained by *mechanical* friction; that of the galvanic fluid by a *chemical* action.

" Secondly: The electric fluid exists in a highly elastic state; and its particles are strongly repulsive of each other, and not disposed to form a permanent union with other bodies. The galvanic fluid, on the contrary, has the strongest tendency to form new combinations; which tendency, as Sir Humphry Davy observes, is so powerful as to counteract some of the strongest chemical affinities. Electricity may be compared to an agent in a state of great dilution or expansion; galvanism to an agent of great concentration and intensity. The former has been compared to the flame of a candle; the latter to the flame of a blow-pipe.

" Thirdly: The electric fluid, in its immediate action, causes great commotion in its passage from one body to another, its particles being mutually repulsive; whereas galvanism enters more readily into bodies, and without creating any great commotion, on account of its tendency to form new combinations.

" Fourthly: The electric fluid is more powerful in its immediate, than in its ultimate effects: the galvanic fluid, on the contrary, is more powerful in its ultimate than in its immediate effects.

Hence is deduced the superiority of the medicinal energy of galvanism; and from this important fact has arisen the idea, that where electricity ends galvanism begins." (P. 15.)

M. La Beaume has dedicated many years to acquiring a knowledge of electricity and galvanism, and may be pardoned for a little enthusiasm in his favourite study. It is probably true that too little attention is paid by practitioners in general to the powerful effects that may be produced by those agents, whilst it is equally certain that those who have especially devoted themselves to those subjects have not under-rated their curative powers.

We should be gratified to learn whether asthma, for instance, is "relieved almost uniformly"* by the galvanic influence, in the present day, as it was reported to be some ten years ago in a provincial hospital; and whether there is more unity of opinion upon the subject, amongst those who have an opportunity of witnessing the experiments, than existed at the time of the publication of the cases to which we refer.

M. La Beaume thus states his opinion of the general application and effects of galvanism to disease.

"First: Galvanism is not at all applicable to acute or inflammatory diseases, or to those disorders which are occasioned or perpetuated by a high degree of arterial or nervous excitement.

"Secondly: Galvanism is very beneficial as a topical remedy in some local diseases, which are not dependent on a constitutional derangement of the system, nor occasioned by an organic or structural change of the parts.

"Thirdly: Galvanism is often serviceable as a palliative means, affording the greatest relief in organic diseases; but it is most effectual in the cure of functional disorders, and in local affections connected with the general health, or altogether dependent on it.

"The medical properties of galvanism are stimulant, derivative, resolutive, and deobstruent. Its remedial power, as a natural excitant of the vital forces, vastly exceeds its energy as a local application; for it has not only a most powerful influence on the nerves and muscles, but also on the arterial and vascular systems; for it increases the action of the heart and arteries, and consequently the fulness or frequency of the pulse, and sometimes both; it also equalises animal heat, restores the balance of circulation, and exhilarates the spirits. Its beneficial effects on the glandular system, (which is at present little known to medical men,) is astonishingly great; for it promotes healthy secretions of the liver, kidneys, and other glands, as well as those of the stomach, bowels, and the skin. It removes spasmodic affections, and allays the morbid irritation of the nervous system, by its tonic and invigorating influence on the chylopoietic organs. Thus it not only restores corporeal strength, but also nervous, sensorial, and intellectual power. Galvanism is especially effectual in removing biliary obstructions, and in curing those chronic disorders of the liver occasioned by a residence in hot climates, as well as torpidity of that viscus, induced by sedentary occupations, or intemperate habits. In these cases it has been found an efficient and beneficial substitute for mercurial medicines, as its action is exceedingly mild and perfectly safe, and does not entail those ruinous and distressing effects on the constitution, which generally follow a course of mercury. Galvanism is also the more desirable, because, during its administration, it does not require confinement to the house, or any other inconvenient restraint: on the contrary, air, exercise, and a generous diet, are found materially to aid its curative process. Though I am fully authorised by my experience to make these observations, yet I do not assert that galvanism is an infallible remedy for every case of disease to which it is applicable, nor that the occasional use of gentle medicines is to be superseded. But I most positively affirm, that such is its sanative powers in the deranged functions of the digestive organs, that it has, in numerous instances, effected the most extraordinary cures after the failure of every other internal and external means, which had been most judiciously prescribed and perseveringly used, under the direction and superintendence of the ablest practitioners. As galvanism is a natural excitant, its effect on the human frame is not like that of ardent spirits, and mineral stimulants or tonics, which are generally temporary. The recovery which has been obtained by the galvanic course has, in the greatest number of cases, been lasting. These facts, which I boldly state, can be borne out by the testimony of a number of respectable individuals of unquestionable veracity, in different classes of society, who have experienced the permanently beneficial effects of galvanic agency, in the cure of obstinate and complicated diseases, which has baffled all other efforts of the best medical treatment." (P. 25—9.)

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* The quotation is not from M. La Beaume.—Reviewer.

The different forms in which the author has administered galvanism are—by a gentle stream, an interrupted current, or vibratory impulses, and not by shocks. There is a manifest dissimilarity between the sensations and effects produced by each of these forms. It rarely happens that any disagreeable sensation is produced, unless from the fearful apprehensions of the timid patient, or the morbid susceptibility of his nervous system. In the course "of the last nine years, I have had (says the author,) about eight hundred cases of stomach, liver, and bowel complaints, accompanied by many distressing local affections, which have been relieved and cured in the proportion of eight cases out of ten." The success is great.

M. La Beaume has "not had many cases of diseased spleen, but in the few that have occurred galvanism has been very useful." Even encysted dropsy of the ovarium, "by the alternation of electricity and galvanism for several months," was entirely removed.

We cannot follow the author through his enumeration of a great proportion of the diseases to which the human body is subject, and in which galvanism is said to have been employed with more or less effect. We would suggest to him the difficulty of determining, particularly in cases of dyspepsia and hepatic derangements, how much benefit he ought to have placed to the account of galvanism, and how much to the "occasional medicines and dietetic rules" he prescribed.

We cannot offer any comments upon the cases with which the book abounds. They are generally dismissed in a few lines, and are much too indefinitely stated to be put to the test of criticism.

We have no doubt M. La Beaume is well instructed in the science upon which he writes, but we are rather surprised that he should think it necessary to assert that he "never made galvanism a stepping-stone to notoriety." He need not be ashamed of any notoriety he may acquire in the fair and liberal prosecution of a useful science.

An Essay on the Use of the Atropa Belladonna, or Solanum Lethale, and the Solanum Hortense; with Practical Observations on their Effects in the Cure of Scirrhus, Cancer, Stricture, and various other Complaints. Dedicated, by permission, to His Royal Highness the Duke of Clarence. By Powell Charles Blackett, Member of the Royal College of Surgeons in London, Surgeon in the Royal Navy, and Surgeon Extraordinary to His Royal Highness the Duke of Clarence, &c. &c. &c. —8vo. pp. 68. Callow and Wilson, London, 1826.

The object of this Essay is to call the attention of the profession to the virtues of the Belladonna. That this plant is a narcotic of great power, is universally known and acknowledged, and its application to certain purposes (as effecting dilatation of the pupil) is very generally adopted. Mr. Blackett, however, is not contented with this, nor with the occasional recourse which is had to the remedy for the fulfilment of those indications, which we usually attempt by some milder anodyne; and steps forward to vindicate the claims of belladonna to a higher rank in the class of drugs, and to a more general adoption in medical practice. This medicine, he says, "should be given in doses varying according to the indications that lead to its adoption. It should be prescribed in small and repeated doses, to operate gradually through the medium of the circulation. In this manner exhibited to influence the kidneys, and prove *diuretic;* the intestines, and prove *purgative;* the skin, and prove *sudorific;* the nerves, and prove *sedative;* the absorbents, and prove the *agent of absorption*; and by these means become beneficial in the various complaints in which it is employed." If, indeed, the belladonna be capable of producing all those effects which we have marked by placing them in italics, it must be acknowledged to possess medicinal agencies of the highest rank; but, notwithstanding our free admission of those powers as a narcotic to which we have alluded, and our full conviction of Mr. Blackett's perfectly good faith, yet we cannot but look upon such varied and multifarious properties as resulting from that favouritism with which men are prone to view the merits of what they have themselves been induced to patronise. Nor is this opinion lessened on finding (at page 46,) that the author thinks it "a remedy of the utmost importance in schirrus, in cancer, and in cancerous ulcers, &c., and, according to the best historical authorities on this subject, we find that these diseases have been cured, as well as palliated, by it in their most distressing stages." We must dissent from the accuracy of this assertion. Mr. Blackett must be quite aware that when STOERK, of Vienna, took all the narcotics, and particularly cicuta, under his especial protection, that they were all (and belladonna among the rest) fully and fairly tried—and found wanting. That schirrus and cancer may be *palliated* by this or any other powerful narcotic, we admit: that they have ever been *cured* by them, we doubt. "A tumor, (says the author,) being at first a hard glandular swelling, without inflammation, is called schirrus." (P. 47.) If, indeed, every tumor having these characters is to be regarded as *schirrus*, then very possibly belladonna may cure this disease; but so will almost any thing else; for, in truth, the recovery will often take place without any remedies being employed. But it is quite obvious that such tumors are often wholly unconnected with any cancerous taint: while with regard to true schirrus, as it will frequently remain for many years quiescent till roused into activity by some unfortunate circumstance, so, when belladonna happens to have been administered in such a case, the indolence of the tumor will naturally be attributed to its controlling influence.

Mr. Blackett states that he has seen belladonna of use in seven cases of tumor; but of these only two are said to have been of a cancerous nature; whereof the one proved fatal, and the other is not described, but is merely called a "cancerous ulcer:" it runs as follows.

"Case II.—W. W. aged forty-five, residing in Southampton-row, applied to me in 1823: she had a cancerous ulcer of the left mamma, about the size of a crown. The belladonna was taken internally, and applied externally, varied in doses and applications according to the symptoms, &c., and, in about nine or ten weeks after the first use and application of the remedy, she recovered." (P. 50.)

We are of opinion, then, that Mr. Blackett has not confirmed, by any sufficient proof, his position with regard to the use of belladonna in schirrous affections. At the same time, we have no doubt that it is a very important remedy in various painful and nervous diseases, as described in the pamphlet before us; illustrations of which may be found in papers by the author, in preceding Numbers of this Journal.

The Use of the Chlorate of Soda, and the Chlorate of Lime. By A. G. Labarraque, Pharmacien of Paris, Member of the Society of Medicine, of the Free Society of Pharmaciens, Resident Assistant Member of the Royal Academy of Medicine, &c. Translated by James Scott, Surgeon.—8vo. pp. 36. Highley, London, 1826.

The Chlorates of Lime and of Soda have lately been extensively used in Paris, as disinfecting agents, and with the most satisfactory results. The effects of the former, particularly, are of the most decided kind in destroying the offensive smell of putrifying animal substances. During the very hot weather of last summer, we witnessed some experiments which were tried with this preparation on a quantity of animal matter which had been purposely set aside to rot. The stench was intolerable: a small quantity of chlorate of lime in solution was poured over it, with the effect of immediately removing the smell altogether. The utility of such an agent in conducting the dissection of bodies far advanced in putrefaction, and indeed under a great variety of other circumstances, is too obvious to require that we should insist upon it. We shall, therefore, content ourselves with having brought the subject under the notice of our readers, and by giving such extracts from the pamphlet of M. Labarraque as are necessary to make the method of its application intelligible.

"*Disinterment and inspection of dead bodies.*—Before approaching a dead body in a state of putrefaction, it is necessary to procure a vessel, into which a quantity of water (twenty-four litres*) is to be put, and into this about eighteen ounces (demi-kilogramme) of the chlorate of lime is to be poured, and the mixture well agitated.

"A piece of linen cloth is to be put into the vessel containing the fluid, in such a manner that it can be withdrawn easily and quickly; for this purpose two persons open the cloth, and, holding it by the corners, immerse it in the liquid, which is to be placed close to the putrid body, and at the same instant the wet cloth is withdrawn from the vessel and spread on the subject, and soon after the putrid odour ceases.

"If there should be any blood or other fluid issuing from the body, a glass or two of the chlorated water should be poured on it. It should then be rubbed with a brush, and the fetid odour will disappear.

"This operation ought not always to be prosecuted exactly in the manner above described, as it is necessary, in cases where the surface of the body is uncleanly, that it should be cleansed as thoroughly as possible before the disinfecting process is commenced.

"If the taint has extended into the surrounding apartments, galleries, staircases, &c. the places infected should be sprinkled with one or two glasses of the liquid, and the stench will cease.

"Care should be taken that the cloth covering the body be constantly sprinkled with the liquid contained in the vessel; thus the reproduction of the fetid odour is prevented." (P. 8.)

* * *

"These two chlorates (of lime and soda) are equally proper for checking putrefaction, yet have not both the same secondary properties. I will explain myself. In the act of disinfecting putrid animal matter, the chlorate passes into a state of hydro-chlorate, and the hydro-chlorate of lime, having the property of absorbing humidity, combines with the moisture of the disinfected body. Now, one of the conditions of putrefaction being moisture, it follows that, when once the disinfecting action is in operation, the chlorate, after a longer or shorter time, according to the quantity, changes its state, and furnishes materials for reproducing the fetidness. On the contrary, the chlorate of soda, in passing to the state of an hydro-chlorate, produces the formation of a very dry salt, that absorbs the moisture, which is the principle of putrefaction. This is what I term a secondary property. The chlorate of soda, therefore, when used for disinfection, prevents, at all times, the reproduction of putrefaction. It is particularly suitable for application to sores of bad character, from the property which it possesses of detaching the disorganised tissue from that which preserves its vital qualities; whilst the chlorate of lime, if it is well saturated, can be used only for simple disinfection, such as in the exhumation of bodies which are to be immediately examined. It is also suitable for the disinfection of the bodies lying at the Morgue, because the sprinklings of the chlorated water are there frequently renewed. The chlorate of lime is eligible for disinfecting water-closets, and for this purpose gentle sprinklings only are necessary, renewed from time to time as required." (P. 28.)

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* About six gallons.

Materia Indica; or some Account of those Articles which are employed by the Hindoos, and other Eastern Nations, in their Medicine, Arts, and Agriculture: comprising also a Formulæ, with Practical Observations, Names of Diseases in various Eastern Languages, and a copious List of Oriental Books immediately connected with general Science, &c. &c. By WHITELAW AINSLIE, M.D. M.R.A.S. late of the Medical Staff of Southern India.—In two Volumes, 8vo. Longman and Co. London, 1826.

THIS work consists of a list of the different articles employed by the natives of Hindostan in medicine, as well as in the arts, and is an enlarged edition (with a new name) of one published in India in 1813. The first volume contains such of the drugs used in Europe as are found in Eastern countries; the second, those found in Eastern countries, but not used in Europe. To make this compilation must have been a work of prodigious labour, and it is impossible to imagine any thing less inviting to the general reader than the result. Indeed, these volumes can never be looked upon otherwise than as an authority to which we may refer for information respecting any particular substance. In this way they will be of use to those who have occasion to practise in Oriental countries, and probably to none other. The second volume likewise contains a list of books in various Eastern languages, connected with medicine and other sciences.

After the name of each article in various Eastern languages, a short account of it is appended, thus—

"ADDATINAPALAY.—*Gadíday gudda purra* (Tel.) *Floral-leaved birthwort. Cattrábunghá* (Sans.) ARISTOLOCHIA BRACTEATA (Retz.)

"Cl. and Ord. Gynandria Hexandria. Nat. Ord. Sarmentaceæ. *Beblatterte Osterluzey* (Nom. Triv. Willd.)

"Of the essential character, Willdenow says, '*Cal.* 0; *cor.* 1-petala, lingulata, basi ventricosa; *caps.* 6-locularis, polysperma infera" (Spec. Plant. iv. 1609.)

"This species of birthwort, which may be seen in the botanical garden of Calcutta, appears to have been first noticed by Kœnig, in the neighbourhood of Madras; it usually 'grows to the height of about four or five feet, with a flexuose, striated stem;

the leaves, which are of a pale green, are obtuse, heart-shaped, with wavy edges, and about an inch and a half long, and nearly as broad; the flowers are solitary; and the bractes cordate petioled.' The plant has the bitterness which distinguishes many of its congeners. An infusion of the dried leaves is given by the native practitioners as an anthelmintic; the medium dose about ℥ij. twice daily. When fresh bruised, and mixed with castor-oil, they are considered as a valuable external remedy in obstinate psora. Dr. Fleming informs us that the root of the Aristolochia Indica is supposed, by the Hindoos of Upper India, to possess emmenagogue and antarthritic virtues; and, from its bitterness, he thinks it may be useful in dyspepsia. The plant is *isarmel* in Hindoostanie; *dulago-vila* in Tellingoo; *cay-khoaica* in Chinese; *hari* in Sanscrit; and *sat sanda* in Cyngalese. The Aristolochia Odoratissima, a native of the West Indies, Lunan says, is, as a bitter and alexipharmic, a most valuable medicine, being powerfully tonic and stomachic; he adds, that the roots and seeds cure the bites of snakes, and make the best bitter wine in the world!" (P. 4, vol. ii.)

A New Supplement to the Pharmacopœias of London, Edinburgh, Dublin, and Paris; forming a complete Dispensatory and Conspectus; including the new French Medicines, as well as Herbs, Drugs, Compounds, Veterinary Drugs, Patent Medicines, Perfumery, Paints, Varnishes, and similar Articles kept in the Shops; with their Composition, Uses, Doses, and Adulterations; being a general Book of Formulæ for daily Reference in the Luboratory, and at the Counter. By JAMES RENNIE, A.M. Surgeon; Lecturer on Chemistry, Natural History, and Philosophy, London; Editor of the Quarterly Journal of Foreign and British Medicine; Author of a Conspectus of Prescriptions in Medicine, Surgery, and Midwifery, the Pharmacopœia Imperialis, &c.—8vo. pp. 490. Baldwin, Cradock, and Joy, London, 1826.

THIS is a dictionary of medicines, regular and irregular; of simples and compounds; of drugs, nostrums, and perfumeries; herbs and chemicals; sauces and other poisons; liqueurs, wines, cordials, waters, spirits, essences, oils, soaps, dyes, jellies, pickles, preserves, and, in short, of "every thing in the world" relating to all that the truly omnivorous animal, man, puts into his stomach, for preserving health, or for destroying it; or which he applies externally for the convenience, comfort, ornament, or disfigurement of his person. These articles are arranged alphabetically, by which the reference is rendered very simple; while under each head is a short, but distinct, account of the substance.

To give a more extended notice of the work would be as impracticable as to analyse Johnson's Dictionary: our readers, therefore, must be contented with our opinion, that much pains seem to have been bestowed upon the compilation, and that it will be found very generally useful.

Lexicon Pharmacopœlium, or a Pharmacopœial Dictionary; containing the London Pharmacopœia of 1824, *in Latin and English; the Chemical Decompositions; a Description of the Simples and Compounds of the Pharmacopœias of London, Edinburgh, and Dublin, with their Properties, Use, and Doses; and in which all former Names are referred to the present Pharmaceutical Nomenclature. To the whole is annexed an English Index of the Technical and Domestic Terms relative to Medicines; a Table shewing at one view the Common and Linnæan Names;* Dr. Cullen's *and* Mr. John Murray's *Arrangement of the Materia Medica; a Dictionary of Operative Medicine; and, lastly, two serviceable Vocabularies for Translating Physician's Prescriptions and the Pharmacopœias. Designed expressly for the Use of Students.* By Thomas Castle, Member of the Physical Society, Guy's Hospital.—18mo. pp. 327. Cox and Son, London, 1826.

The contents of this little volume are so fully described in the title-page, as to require very little additional notice from us. Like the preceding volume, it is a dictionary of medicines and pharmaceutical terms, but is more limited in its object, and less complete in itself. It is, however, more condensed and portable: it is "expressly designed for the use of students," and the manner of its execution, and the tables and vocabularies it contains, will render it of very great assistance to the medical pupil.

COLLECTANEA.

> Floriferis ut apes in saltibus omnia libant;
> Omnia nos, itidem, depascimur aurea dicta.

PHYSIOLOGY.

Remarks on the Communication of the Lymphatic Vessels with the Veins. By John Rossi, Doctor in Surgery, and Member of the Medico-Chirurgical Society of Bologna.—In giving a short account of a series of researches on the lymphatic system, which I undertook this year in the great hospital of Parma, I am sensible that it is not in my power to enrich science with any important novelty, but merely to announce a few observations which may probably be useful in solving a physiological question.

It is known that many physiologists, having repeated those experiments which relate to the absorption of fluids, and having found many substances in the veins which they sought for in vain in the thoracic duct, have not hesitated to revive the ancient theory of venous absorption. It is, however, certain that various difficulties were successively pointed out against this doctrine; and that in two separate Numbers of the Anthology of Florence, in the course of the year 1824, it was announced that Dr. Regolo Lippi had discovered that many lymphatic vessels emptied themselves directly into the veins; and consequently, it being evident in what manner substances absorbed by the lymphatics were introduced speedily into the veins, that the experiments of Magendie, and others who maintained the doctrine of venous absorption, were overthrown, and became of no value. The importance of this question determined me to seek for these lymphatic trunks upon the dead body; and, although the work of Dr. Lippi has not yet been published, I do not think it necessary to retard the publication of my Remarks, since my object is not to refute any man's opinion, but merely to declare the kind of communication which I have been enabled to detect between the two systems.

Experiment 1st.—On the body of a young man who died of phthisis, in whom the abdominal viscera, as well as the mesenteric glands, were in a healthy state, I injected with mercury (according to the method of Walther) the lymphatic vessels passing out from the intestinal glands on the left side, after having tied the thoracic duct about four inches above the diaphragm. When a sufficient quantity of mercury had been thrown in, the thoracic duct below the ligature appearing to be full of the injected liquor, the operation was suspended. By the most accurate examination, I was not able to discover any lymphatic injected in the mesentery, and consequently I did not perceive any vessel emptying itself from the principal ramifications of the venæ portæ. I then removed the intestines, together with the internal lamina of the peritoneum which covers the lumbar portion of the vertebral column; thus exposing the aorta, the vena cava, and the lymphatic lumbar plexus, which was most beautifully injected. The vasa efferentia of the inguinal glands, in which the tube had been placed, after having passed the external and primitive iliac glands, went, as is usual, to the inferior lumbar glands, forming a plexus, and lastly to the superior lumbar glands: from these two the lymphatics went out, and, reuniting in a few trunks, gave origin to the receptacle of Pecquet. From the same glands I also saw three vessels take their origin, not very well filled with mercury, and not very small; which vessels, instead of going to the thoracic duct, emptied themselves evidently, one in the vena cava, just as it emerges from the posterior curvature of the liver, one at the beginning of the left emulgent vein, and the third again in the vena cava, near the termination of the right spermatic vein.

On the three points where these vessels united themselves with the above-mentioned veins, I passed a tight ligature; I then placed the injecting tube in the vasa inferentia of the lumbar glands, and soon after the three vessels became filled with the mercury. This mode of proceeding is always necessary whenever these trunks are required to be perfectly filled with the metal, in order to prevent its flowing into the veins. The mere appearance of these vessels induced me to suspect that they are lymphatics, although there is some little difference between them and the lymphatics which go to the thoracic duct, not only apparent to those accustomed to anatomical investigations, but also to the unpractised. The mere examination of their exterior does not appear to me sufficient to prove that they are lymphatics; and the more so, because they were never considered in that light by MASCAGNI, REZIA, SCARPA, PANIZZA, and many other celebrated anatomists; and I wished, therefore, to discover the truth by more certain methods,—that is, by examining their structure, and comparing them with those lymphatics concerning which there does not exist a doubt. I therefore removed from the body the three vessels just described, (which appear to be the same observed by Lippi, and recognised by him as lymphatics,) and, placing them upon a proper table, opened them longitudinally: I examined them with a good lens, and found that their internal surface was continuous, and that there was no indication of their possessing valves. I then took from the body some lymphatic vessels, and, opening them in the same way, I evidently saw valves throughout their whole length, which appeared to me to be double, and about two lines distant from each other.

We know that valves are constantly to be found in the lymphatic system of all animals. We also know that the venous ramifications of the three great cavities are wanting in valves, as well as all those whose diameters are less than one line; and therefore the valve is the great distinction between the lymphatic and the smallest blood-vessel. Besides this characteristic difference between the two vessels, it appears to me also that the thickness of the parietes, and the general aspect, as I have before said, was more like that of a vein than a lymphatic; since these latter vessels, when filled with mercury, present externally to the naked eye the knots produced by the valves, whilst those *supposed* lymphatics are merely cylindrical tubes, and, instead of knots, small interstices may be perceived between the globules of mercury, filled with a reddish liquor, which is in reality blood.

Finally, I separated from the body the lumbar and iliac glands, for other purposes foreign to these experiments, and found that, from the lateral and posterior surfaces of these glands, certain little vessels were given off, containing some globules of mercury; some of which went directly into the vena cava, others into the primitive iliac veins, and others into the last lumbar vein but one on the left side which traverses the lumbar column, passing under the aorta. These little vessels, which can only be seen by lifting up the glands, were a few lines in length, and there I could not examine them, but they had the aspect of veins.

Experiment 2d.—In the body of a youth, about eighteen years of age, which was emaciated to the greatest degree, I injected in the same manner the lymphatics of the mesentery. These vessels pursued their course to the mesenteric glands, and issuing from them again after visiting other glands, were reunited into a few trunks, which, passing near to the superior mesenteric artery, emptied themselves into the receptacle of Pecquet. In fact, the whole thoracic duct was full of mercury. From the abovementioned glands, and particularly from the largest of them, vessels, containing but little mercury, having but a short course, proceeded, together with the lymphatics, and which terminated in the larger ramifications of the venæ portæ; many of them especially in the splenic vein. I was not able to find any of them terminating in the emulgent vein, as observed by Dr. Lippi. I made the same observations upon these vessels as in the preceding experiment, but I could not discover any indication of valves; whilst the lymphatics which emptied themselves into the thoracic duct were provided with them.

Experiment 3d.—The iliac lymphatics were injected in the body of a female, as in the first experiment, as well as those of the mesentery. These injections presented a greater number of branches, which emptied themselves into the vena cavæ, and into the ramifications of the venæ portæ. I obtained the same results on examining these branches, and comparing them with the true lymphatics, as in the former experiments.

Experiments 4th and 5th.—In two other extenuated bodies, I injected the iliac and mesenteric lymphatics. I obtained the same success, and demonstrated the same trunks as before. In one of the bodies, I began the injection above the right knee: the inguinal glands were injected, and I perceived that those minute venous ramifications which proceed from them, and go directly into the femoral vein prior to its passage through the crural arch, contained some globules of mercury, together with blood, and simulated the appearance of lymphatics. In order to be more certain that these little vessels possessed no valves, I put in practice the following plan:—I emptied the mercury from them by means of an incision made close to the glands from which they arose; then I placed the pipe in that point of the vessel in which they united with the veins, and scarcely had I opened the piston, when I saw the mercury run with velocity within these vessels, and make its exit at the aperture which I had made, which could not have happened had these been lymphatic vessels.

Experiments 6th, 7th, and 8th.—The iliac and mesenteric lymphatics of the bodies of three persons who had died of consumption were injected: the same branches going into the veins were perceived, and the most accurate examination afforded the same results as on the former occasions.

From these experiments it appears to me that the following deductions may be made:—

1st. That mercury injected into the lymphatic vessels, after having traversed the glands, passes into the veins by means of certain vascular branches, which afford a communication between the large veins and the glands themselves.

2d. That these branches, although having at first sight the appearance of lymphatics, ought to be considered as veins, whose principal office is to carry back the blood which is superfluous for the nutrition of those glands.

The mode in which I consider these vascular branches which pass from the glands to the veins, agrees perfectly with the ideas of MECKEL and FOHMAN, who declare that the veins of the glands carry to the larger veins matters injected into the lymphatics. It also corresponds with the anatomical researches of MASCAGNI, who observes that, in many injections of the lymphatic system, the minute veins of the glands are filled, so as to appear like lymphatics; so that many authors before him were deceived by this appearance.

It being established, then, that the vessels seen in my experiments were veins rather than lymphatics, it is clear that the communication of vessels from one system to the other does not take place by branches; and it therefore only remains probable that it may be effected in the ultimate subdivisions of these vessels in the parenchyma of the glands. I say that this is probable, because the anastomoses in the interior of the glands have not been seen, and the argument is only upheld by the passage which the mercury makes into the venous ramifications; and, in truth, although injection evidently shows this passage, yet it may not exist in nature, because it may be the consequence of the impetus of the injection, concerning which it may not be useless to observe, that the lymphatic glands being provided with many blood-vessels, it may easily happen that the fluid injected into the lymphatics may open a road for itself into the veins: but this we may reasonably doubt, observing that the vessels passing out of the glands ought certainly to be destined to receive those substances which have been brought to them by the vasa inferentia.

On this point I think it may be proper to subjoin an observation, which may have some relation to this case. In a young female, who died of an affection of the chest, I found the lower extremities swollen and of considerable bulk. I would not use an injection, hoping to be able to see all the iliac and lumbar lymphatics; and I was not disappointed. I found them all full of lymph and well distended; the glands into which they went were loaded with lymph, from some of these, branches were seen which passed into the veins, and which had all the appearance of the vessels in question. These were all filled with a coloured matter, as were all the little veins. If a direct and natural communication had existed, it appears to me that the lymph would also have been found in these venous branches, although, after an accurate examination, I could not find any.

This discovery of the above-mentioned pretended lymphatics does not surprise me so much, (men of the greatest merit being sometimes deceived in making experiments,) as the following deduction which appears in the Anthology already quoted :—" This discovery, besides assuring to the lymphatics the exclusive faculty of absorption, substitutes truth and evidence to the hypotheses which have hitherto been formed for the purpose of explaining the rapid passage in the urine of certain matters taken with the food or as drink, and announced by the smell and colour."

Admitting for a moment the existence of true lymphatic trunks, which, arising from the intestines, empty themselves into the emulgent veins, ought we to believe that these veins deposit in the kidneys the substances absorbed from the internal surface of the intestinal tube? Are the emulgent veins canals that receive the blood from the cava, and carry it to the kidneys? Does the blood of the left spermatic vein, which discharges itself into the corresponding emulgent, go against its usual current to deposit itself in the kidney, rather than follow the course of the blood contained in the emulgent itself?

Such are the remarks which I proposed to make concerning the communication of these vessels. I do not pretend, however to have refuted by anticipation the work of Dr. Lippi, nor positively to conclude that no lymphatic trunk communicates directly between the two systems: I only wish to observe, that the branches seen by me, although at first sight they might seem to be lymphatics, must, after a rigid examination, be considered as veins; and it is a consolation to me to think that some consummate anatomists have expressed the same opinion. (*Annali Universali.*)

Poisoned Wounds.—At the Academie Royale de Medecine, M. BOUILLAND lately read a paper on some Experiments relative to the Effects of Compression in Poisoned Wounds. Nine experiments were made. In the first five, M. B. introduced two or three grains of strychnia into the cellular tissue of the thigh of a hare, so that he could at will use compression on the limb, either by a ligature above the wound, or with an unexhausted cupping-glass, or with the hand alone placed on the wound; and he found that he could, by applying the compression or not, either prevent or produce the effects of the poison. He found, by many trials, the good effects of compression in causing to cease or re-appear alternately the symptoms, according as he applied or removed the instruments.

In a sixth experiment, M. B. applied six leeches around the little wound, into which the strychnia was introduced; and he remarked that none of them would bite, yet they all died.

In the three last experiments, M. B. used half a tea-spoonful of hydrocyanic acid, instead of strychnia, and found the same results. He concludes—

1st. That these furnish new arguments in favour of the idea that many poisons are absorbed.

2d. That their deleterious effects would be prevented by hindering their absorption, or arresting the circulation in the part to which they are applied; and that it is in this way the cupping-glasses used by Dr. Barry act.

3d. That, in cases of poisoned wounds, a ligature above the wound would have the same effect as the cupping-glasses.

PATHOLOGY.

Variola.—The following remarks contain nothing of novelty, but are of some interest, as showing the view taken by our continental neighbours.

From many cases of sporadic variola, M. Ribes, who makes the Reports of the Clinique of La Pitié, thinks that their severity depends entirely on the quantity of pustules. M. Bally divides cases of variola into three sorts—confluent, semi-confluent, and distinct; and his motives for so doing are these: The progress of semi-confluent is longer than that of distinct, and less than that of confluent; the pustules are more numerous than in the first, less so than in the second. We meet with agglomerated groups of pustules when all the rest are distinct; the pustules are less prominent than in the first form, but more so than in the second. The symptoms are more severe than in the distinct, less so than the confluent. In fine, the mortality differs essentially; for a much greater number of cases of semi-confluent are cured than of confluent, and almost all the cases of distinct are cured.

In those of the first class, which are very deadly, the most imminent danger is during the period of maturation; delirium, coma, enormous swelling of the face, extreme dyspnœa, great heat, frequent, full, and embarrassed pulse, &c. There is no morbid state, says M. Bally, where the symptoms appear more decidedly inflammatory, or where we are more imperatively called upon to use depletion, and yet where the bleedings, and other antiphlogistic means, are less efficacious. This remark is an additional motive for thinking that it is not the inflamed state of the skin, and the number of little phlegmons upon it, which constitute all the severity of the disease. In fatal cases, the inspection of the bodies has shown marks of death from true asphyxia, congestion of the brain and membranes, and considerable pulmonary engorgement. In some there were marks of pneumonitis; the larynx and trachea coloured of a reddish brown, and studded with variolous pustules, or rather traces of open pustules, the eruption scarcely ever passing the bifurcation: we have only once (says M. Ribes,) seen them about half an inch below it.

In the semi-confluent cases, which run through their course regularly, the period of desquamation is the most to be dreaded. Then the debility consequent to so severe an affection,—the irritation of the skin, and its denudation,—the greater "*impressionnabilité*" which remains, are often the sources of troublesome symptoms; such as very numerous subcutaneous abscesses, angina, irritations of the chest and intestinal canal, approaching to a state of phlogosis. (*Revue Medic.*)

PRACTICAL MEDICINE.

Peculiar Sore-throat affecting Children.—The following observations are extracted from a paper in the Edinburgh Journal of Medical Science, by Dr. HAMILTON, jun. Professor of Midwifery.

In the last edition of the Hints for the Treatment of the principal Diseases of Infancy and Childhood, the following brief notice of an affection of the throat is inserted:—

"There is a very dangerous, but fortunately rare, modification of sore-throat, which begins in the form of a whitish spot, like that of thrush, (though more definite in its shape, being round or oval,) on one or both tonsils, unaccompanied at first by fever, and attended with only a trifling degree of uneasiness in swallowing. By and by this spot enlarges, its edges become of a florid colour; fever steals on; and the act of swallowing grows painful. A slough gradually forms, with evident ulceration at its edges; the fever increases; and headache and restlessness supervene.

"The partial separation of the slough, together with the rosy colour of the edges of the ulcer, with the moderate degree of fever for some days, promise a favourable issue. But very unexpectedly slowness of breathing, without either difficulty or wheezing, takes place, with excessive and sudden sinking of the living powers; and it generally happens that, within a day from this change, the fatal event takes place. The breathing at first falls to eighteen respirations in the minute,—then to sixteen,—to twelve,—and finally to ten or eight. Sometimes, with the sloughing, the tonsil swells; and in some cases both tonsils are affected.

"Hitherto, with one exception, this disease has proved mortal in every case in which the author has been consulted; and he considers the slow breathing to be a sure symptom of the fatal termination.

"With respect to the nature of the disease, his experience is too limited to enable him to give a decided opinion. He has repeatedly known two individuals of the same family attacked in succession with the disease, but he does not feel warranted in pronouncing it to be infectious.

"It is with feelings of sincere regret that he has to state that no mode of treatment, yet discovered, seems to have any influence in checking the progress of this disease. The most powerful local applications, such as stimulating gargles, the use of caustic, &c., and all the ordinary means of supporting the strength, have, in the cases to which the author was called, been pursued with much anxiety and activity, without any benefit. The operation of opening the windpipe was, in one interesting case, (where, from the swelling of both tonsils, there was apparently a mechanical obstruction to the breathing,) had recourse to without any avail."

Further experience has convinced the author of these remarks that two other symptoms occasionally attend the disease. The one is a most offensive fetor of the breath, and the other is the sudden occurrence of cynanche trachealis. The former of those symptoms has not been perceptible in the cases he has attended, or on which he has been consulted, sooner than from the sixth to the ninth day after the disease had been distinctly marked; and the latter has hitherto occurred before the sixth day.

Thus this very curious affection proves fatal in two different ways,—viz. by exciting cynanche trachealis, or by inducing slow breathing and progressive sinking of the living powers; and, in repeated instances, these two different terminations have occurred in the same family.

There can be no difficulty in understanding the former of these symptoms; for it is evident that the local inflammation of the tonsils and uvula is, in such cases, extended to the larynx, after having affected the pharynx.

But the other, and (as far as the author's personal observation warrants him to believe) the more common termination, does not admit of such a ready explanation. The partial separation of the slough, the rosy colour of the edges of the ulcer, and the moderate degree of fever, make the slow breathing, which suddenly supervenes, very unexpected to the attendants; and the rapidity with which death follows the slowness of breathing has appeared quite wonderful. The explanation which occurs to the author is, that the matter secreted by the ulcer, being evidently of the nature of a morbid poison, may act by paralysing, or otherwise influencing the par vagum, or the branches of the eighth pair of nerves of the medulla oblongata, on which Le Gallois has proved, by direct experiment, that breathing depends.

(Here follows some reasoning upon the probability of absorption.)

If the reasoning thus offered be correct, it should follow that, in all cases of ulceration on surfaces communicating with the respiratory nerves, the physician, in the treatment of the disease, should, by the most vigorous efforts, endeavour to accomplish two objects,—viz. to prevent the extension of the local inflammation, and to lessen the diseased secretion.

The former indication seems, at first sight, the more important one in the particular and curious disease now under consideration; for it appears, for some time after the attack, to be merely a local affection. Accordingly, means calculated to fulfil this intention were suggested, and pursued with great energy, in all the cases till lately to which the author was called. He was, however, mortified to find that neither the application of leeches, followed up by purgatives and blisters, nor the use of topical stimulants,—such as the various irritating gargles, the application of the nitrate of silver, and even scarifications, proved in the slightest degree beneficial. He was resolved, therefore, to take the first opportunity of ascertaining the efficacy of attending principally to the second indication: that opportunity has lately occurred, and he now communicates the result of the experiment.

On Tuesday, June 27, 1826, he was requested by Dr. Torrance (an old pupil) to visit a little boy, aged six years, labouring under a modification of sore-throat, which appeared to Dr. Torrance to be of a singular character. The Doctor stated that this was the third child in the family who had become affected with the disease. The first of these was a girl, nine years old, still alive, but apparently sinking. She had been ill since the 12th day of June; and, ten days after her attack, her brother, aged four years, was seized with the same symptoms, and, after a certain progress, cynanche trachealis supervened, and proved fatal on the 26th of June; so that this little boy was only four days ill.

Before visiting the patient, the description contained in the last edition of the Hints for the Management of Infants and Children was put into Dr. Torrance's hands, and he immediately declared that it applied most accurately and minutely to the cases he had been attending, with a single exception,—viz. that the excessive fetor from the ulceration of the throat was not specified in the printed description.

When the state of the little boy was examined, the slough upon each tonsil, larger upon the right than on the left, with a slight swelling of the velum, was strongly marked, but there was no fever. It was ascertained that the first symptom of indisposition had been discovered on the preceding morning, and that he had been treated with great activity,—having had a dose of calomel and jalap, which had operated both upwards and downwards, and having had leeches applied externally to the throat. Besides the attendance of Dr. Torrance, the little patient had the benefit of the assistance of two intelligent young gentlemen studying medicine, who lodged in the house; and they, by the by, cordially concurred with Dr. Torrance in bearing testimony to the accuracy of the coincidence between the printed description of the disease, and the progress of the symptoms in the children they had attended. The state of the little girl was desperate, and she sunk on the 30th of June.

Agreeably to the views already explained, it was suggested that the great object to be aimed at should be to lessen the diseased secretion from the throat, and with this intention the sulphate of quinine, in as large doses as could be administered, was prescribed. At the end of twenty-four hours it was found, however, that this medicine could not be retained, or rather, perhaps, could not be received in sufficient doses; and, as the ulceration was increasing and fever was stealing on, it became necessary to change the medicine without altering the indication.

Adverting to the extraordinary efficacy of the sugar of lead in restraining passive hemorrhagy, and in lessening secretions depending upon laxity of fibre, it was judged that this medicine might answer the purpose in view, and at any rate that it merited a fair trial. Eight grains dissolved in eight ounces of rose-water, to which forty drops of tinctura opii were added, were therefore prescribed; and of this half an ounce were directed to be given every three hours while awake. Instead of the stimulating gargle hitherto employed, consisting of capsicum, &c. a solution of the sugar of lead, of the strength of a scruple to eight ounces of distilled water, was substituted. A dose of caster-oil was directed to be given every second morning.

Under this treatment, from which no inconvenience whatever was experienced, the sloughs gradually contracted, and the swelling of the velum pendulum palati progressively decreased, in the course of which it was discovered that the ulceration had extended over the pharynx behind the velum, and the cure was completed on the 16th of July. The medicine was begun on the 28th of June, and was continued till the 14th of July, occasionally diminishing and increasing the intervals between the doses. The whole quantity of the acetate taken during that time was twenty-four grains.

From the cases of this disease which have fallen under the author's notice, he is now inclined to believe that it is infectious. While he has repeatedly seen two children in one family attacked in succession with the disease, he has only known one instance where, in a family of several children, it was confined to a single individual. He may add that, in so alarming and fatal a malady, he considers it the duty of a physician to hold out that it is infectious, and to enforce all the ordinary precautionary measures to prevent its spreading, even although certain doubts of its infectious nature might impress his own mind.

The remarks in the preceding pages are offered in illustration of a general principle applicable to cases of morbid ulceration, which an intelligent practitioner can modify according to the individual instances falling under his charge.

That remedies must be adapted not only to the particular constitutions of the patients, but also to the complications and the degrees of severity of the symptoms, is a proposition generally assented to, but not always acted upon; and yet it is in this art that the talents of an active and intelligent practitioner are chiefly conspicuous. This consideration should lead every physician to avoid forming a prejudice in favour of one or two drugs for the cure of particular diseases. Thus, in some cases of the disease now under notice, the sulphate of quinine or of zinc, or the ammoniarate of copper, or some of the oxides of iron, or the mineral or vegetable acids with wine, or even some of the preparations of mercury,* may be preferable to the sugar of lead; but the facility and safety with which that latter medicine can be given, makes it a most convenient prescription for children. In cases of cynanche maligna, a gargle composed of a solution of this medicine might probably be substituted, with much advantage, for the stimulants hitherto employed.

Tincture of Cantharides for the Bites of Venemous Reptiles.—M. le Docteur Ricord, Sen. during a long residence in America discovered what he considers a sure mode of preventing mischief from such bites. "It is sufficient (he says) to pour a few drops of tincture of cantharides on the wound to cause a redness and vesication; not only is the poison rendered harmless, but the stings of the reptiles are removed with the epidermis that the blister raises." —*Revue Medicale.*

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* In the only case of cynanche trachealis supervening to the cynanche maligna which the author has seen terminate favourably, the boy (four years old) had a dose of calomel every hour while the symptoms continued violent, and at the same time was allowed wine in large quantities.

Laurel Water in Epilepsy, by Dr. Muller.—A young girl, twenty-two years of age, had been epileptic for six years. The attacks frequently returned twice in one day; they were of short duration, and in the intervals the patient had spasms in the arms, and moved her fingers in a convulsive manner. She had been for eighteen months bedridden, unconscious of her state and actions; eating and drinking any thing offered, but asking for nothing, and passing her stools involuntarily. A variety of means were tried without effect, and all of them, but particularly large bleedings, appeared to be hurtful. M. Muller was called, and found the patient in this state. She had always been regular in menstruating, and had never had any but the ordinary diseases of infancy, and never any chronic eruptions of the skin, nor worms. The tongue was soft and moist, belly pliant, respiration natural. Not being able to find any cause for this disease, M. M. thought of employing laurel water, from which he had often derived great advantages in nervous affections similar to this. He prescribed it in the dose of twenty drops daily. After the consumption of an ounce, the convulsive movements of the limbs had completely ceased; and after the administration of three ounces more, (augmenting each dose two drops, till the dose was eighty drops,) the attacks of epilepsy never returned. The patient having recovered her sensibility, left her bed, and executed spontaneously every function. The treatment was concluded by an infusion of Valerian, with addition of Træ. Canellæ and Liquor Ammoniæ; and, after using for some time some preparations of iron, she quite recovered her health. (*Ibid.*)

Cold Water in Tic Douloureux.—Dr. Bird, in one of the German Journals, relates a case where a lady, whose sister had fallen a sacrifice to the agonies of tic douloureux, was herself, six weeks after her first lying in, seized most severely with this disease. Many physicians, and of course many remedies, were tried, but in vain, till Dr. Bird suggested the application of compresses dipped in cold water, and applied to the pained part. This immediately had the desired effect, and always afterwards relieved her in future attacks!

Intermittents.—In these fevers M. Bally freely uses the sulphate of quina, in doses carried to the extent of twelve to sixteen grains, and then gradually decreasing them when the paroxysms have ceased to appear. M. B. thinks that it is both useless and dangerous to wait to prepare the patient for the administration of the remedy; he recommends immediately attacking it by the doses of quina above mentioned. Severe and obstinate headache ordinarily follows the sudden stopping of an intermittent of some duration; it appears to be occasioned by the nervous derangement which has so great a share in these affections: the subcarbonate of iron, gradually increased, appears to relieve it. M. Bally (it is said) has at last proved the important fact, that sulphate of quina even in large doses always retards and softens the pulse. (*Ibid.*)

Exhibition of Sulphate of Quina by Friction.—M. **Bally**, having observed that the sulphate of quina very frequently irritates the stomach when swallowed, determined to try its effects by rubbing it on the gums and the mucous surface of the lips. He cured nine cases of intermittent and remittent fevers by this method: the dose was usually from four to eight grains morning and evening. The only inconvenience was from the extreme bitterness of the medicine, which he suggests might be corrected by mixing some other substance with it.

SURGERY.

Injury of the Rectum.—A nurse, in applying a glyster, introduced the point of the syringe so roughly and unskilfully as to push it through the back part of the rectum. By the exertion of considerable force, she emptied the contents of the syringe into the pelvis. The patient, a young lady, suffered considerable pain afterwards. On the sixth day a membranous mass passed away with the fæces, which was ascertained to be a portion of the rectum. Upon examination, an opening was found in the back part of the gut, about the size of a dollar, and about two inches from the anus. If a sufficient quantity of water was injected, the rectum was distended, and also the interval between the posterior surface of the gut and the sacrum, in consequence of the fluid escaping through the aperture, the edge of which could be felt loosely floating. The greatest distress and danger arose from the escape of the fæces into the pelvis. Injections were used for the purpose of washing out any portion which passed through the opening: a part of the fæces still passed in the natural manner. Mild injections were frequently used, in a small quantity, that the rectum might not be kept separated from the sacrum. Light broths, yolk of eggs, &c. were allowed as diet. Professor **Grafe** was consulted under these circumstances, and he adopted the following plan. He introduced a portion of the intestine of an animal into the rectum, and, having filled it with water, he tied the end projecting from the anus: by this means the rectum was kept in contact with the sacrum. Air was afterwards substituted for water, as the weight of the latter was found inconvenient. This plug was removed every twenty-four hours, and the fæces, which its presence prevented from descending, evacuated; and the intestine well oiled, again introduced, and filled with air. A gradual improvement followed, and in a few weeks the wound was entirely closed, without any contraction of the rectum, and the fæces were passed without difficulty.—*Journal fur Chirurgie von Gräfe und Walther, band* ix.

Acupuncturation in Tic Douloureux.—Two cases are given by Dr. Bergamaschi, illustrating the good effects of acupuncturation in this most painful disease, when most other known remedies had been tried, and failed. J. Crespi, æt. 38, born of healthy parents, himself of good constitution, and always healthy, had occasion to work for some time in a damp place, and soon afterwards a severe and almost insupportable pain came on in the occiput, behind the ear, along the zygomatic apophyses, in the upper jaw, in the forehead, and particularly over the eyebrow. During five months every means were tried; as the use of camphor, musk, belladonna, hyoscyamus, stramonium, opium, leeches, blisters, mercury, electricity, but all without success. A convulsive twitching agitated the right eyelid and upper lip. M. B. ordered leeches, and, after their application, neutral salts, with tartarised antimony. This calmed the patient, but next day violent paroxyms came on, and two days after the patient was so ill as to threaten to destroy himself if not relieved. A steel needle was plunged during a slight remission into the superior and anterior part of the temple, and left for a few minutes; another, introduced near the angle of the inferior jaw, penetrated to the bone; a third pierced the massetic muscle; and the last was placed running from before backwards in the mastoid apophysis towards the angle of the jaw. They were left in only during ten minutes, before the expiration of which the pain had ceased. Some pain having returned on the following days, it was necessary to have recourse from time to time to the acupuncturation, which always removed it as if by enchantment. Soon afterwards the patient resumed his occupation, and has had no return.

Martin Pasca, æt. 43, very robust, after working with his arms exposed on the morning of January 8, 1825, was suddenly seized with sharp pain in the vault of the palate, extending to the tongue, and externally to the right cheek, to the masseter, and towards the angle of the inferior jaw, occupying also the ear, the muscles of the neck, and the integuments. For four months the pains were so dreadful that, from fear of increasing them, the patient generally refused to eat or drink; he became emaciated in consequence. When called to this case, M. B. first ascertained whether any carious teeth might have caused the disease; which not being the case, he plunged transversely into the buccinator muscle a long steel needle, a second behind the ear, and a third at the angle of the inferior jaw; they were allowed to remain for eight minutes, during which time the convulsive contractions of the lower lip, as well as a great part of the pain, ceased, and the patient afterwards had some sleep. This relief did not last long: a meal taken in the evening brought back all his sufferings, which were next morning removed by the introduction of five needles, left in for twelve minutes; before using these last, M. B. had given an emulsion, containing Ext. Hyoscyami: the pain ceased suddenly, and was succeeded by a sense of itching. From this time the exhibition of Ext. Hyoscyami internally, and frictions with oil mixed with this substance, were the means used, and during eight months scarcely the least return of pain was experienced.

INTELLIGENCE.

MONTHLY REPORT OF PREVALENT DISEASES.

During the past month the weather has been more than usually capricious; we have had some days of rather severe cold, but upon the whole a close, damp, muggy, and comparatively warm state of atmosphere has prevailed. Fever, which we have noticed in our last Reports as rather alarmingly prevalent, seems disposed to give way without constituting a regular epidemic; at least fewer cases of this nature have fallen under our observation during the past month than during either of the two which immediately preceded it. The sharp weather above alluded to gave rise to a considerable number of pleurisies, and other attacks of an acute inflammatory character; so that the lancet and tartarized antimony were for a short time in requisition about the end of November. No sooner, however, had the dull and wet weather taken place of the few days frost, than there was a recurrence of those abdominal derangements which constituted so large a portion of the diseases prevalent during the summer. These bowel complaints have been much more limited in number, but some of them quite as severe in degree, as those which occurred at an earlier period of the season. To the same oppressive state of atmosphere, and to the sedentary habits it almost necessarily produces, may, in part at least, be attributed the unusual number of nervous affections which have been recently witnessed by the writer. Under this general appellation of *nervous* we include hysteria, and all the cousins german of that numerous and widely connected family. In one instance, a young woman remained for three days in a state of insensibility, with dilated pupils, and other symytoms of a character *apparently* so well marked, as to render it difficult, or perhaps impossible, to distinguish it from true apoplexy, otherwise than by the previous and subsequent histories of the case, which unequivocally pointed out its hysterical nature.

December 25th.

The following note refers to the case of R. Fitcomb, given at page 11 of the present Number:—

My dear Sir,—I am sorry to be obliged to add a further report of the case of compound fracture which I amputated on Saturday last, which I will thank you to subjoin to my paper in any form you may think proper. On Monday night he became delirious, with a very rapid pulse, dry tongue, and hot skin; he did not complain of any pain in the stump, and there was not the least appearance of inflammation up the limb. When I visited him yesterday, his eye was deeply tinged with bile, and his whole skin had a subjaundiced appearance. His pulse was very frequent and sharp, but weak, and easily compressed; his tongue clean, but dry, and rather red at the tip. He complained of no pain. On dressing the stump, the edges were in close contact, and appeared to have united in many places: on pressing it lightly, a small quantity of unhealthy pus escaped near the centre. Conceiving that the constitutional irritation might be connected with this, I directed the stump to be poulticed, to favour the escape of matter; some calomel and opium to be taken at night; the head to be shaved, and bathed with spirit-wash; and a large blister to be applied to the nape of the neck. Towards evening he became violently delirious, and continued so until the following morning, when

He sunk gradually, and died about 11 A.M. Permission could not be obtained to examine the body; but I have little doubt there was visceral disease, as I am informed that he had been for years in the daily habit of drinking twelve or thirteen glasses of undiluted spirits, besides much porter and ale. On examining the limb after amputation, a large loose portion of dead bone was found immediately between the fractured ends, which effectually prevented any attempt at reparation. The spine of the tibia was bare for some inches above the fracture, and from the groove commenced by the absorbents, there is no doubt that it had perished to this extent. The limb was minutely injected with size and vermilion, to shew the granulations, and any reparative process.

Dear Sir, very truly yours,

HENRY EARLE.

George-street, Wednesday Night; Dec. 13, 1826.

Application of Lunar Caustic.

Dear Sir,—I have just received a paper from Mr. HIGGINBOTTOM, containing "Directions for the Application of the Lunar Caustic." It is of course too late for the next Number of your Journal, but I thought you would have the kindness to announce the reception of the communication, *and call the attention of your readers to it*, observing that this remedy is followed by complete success or complete failure, according as it is applied properly or carelessly.

Yours very truly,

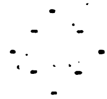
MARSHALL HALL.

15, *Keppel-street, Russell-square; Dec.* 19, 1826.

Vaccination.—The following observations on Vaccination, with reference to Dr. GREGORY's paper in our November Number, are from the pen of Mr. NORTH.

"In the performance of this very simple but most important operation, it is at all times highly desirable, and in many cases an object of the first importance to *ensure* its success."—I am indebted to Dr. Gregory* for this sentence, and willingly admit the truth it inculcates. But, as I am inclined to believe that some of the remarks which have been made by that gentleman on vaccination are more likely to lead to a *failure* of the operation than to ensure its success, I am induced to state my opinion very briefly upon the subject.

The use of a very sharp lancet is urgently recommended by Dr. Gregory for the performance of vaccination. He observes, "it has frequently occurred to him to notice that a lancet which has been successfully employed in venesection, is yet not sufficiently sharp for the purposes of vaccination." I will not venture to say that Dr. Gregory is singular in this opinion, but I know that most practitioners prefer a lancet with a roundish and rather blunt point. A very sharp lancet is objectionable from the flow of blood it causes, by which the lymph is either washed out of the puncture, or so diluted as frequently to render the operation unsuccessful. An instrument of the former description may be employed, and produce scarcely an appearance of blood.



The next point upon which I shall venture to offer a few words, appears to me of much importance. Dr. Gregory states "that the most complete effect, both upon the arm and constitution, is made by *six* or *eight* punctures, supposing them all to be effectual." We are directed to make them "in a circular form, and at moderate distances; as thus — The advantage of the circular form is, that the true figure of the areola is thus preserved." But I must be allowed to suggest that there is no advantage in ensuring the formation of an areola in this manner. It is clear that from each puncture a certain extent of inflammation may arise, and that the united inflammation of "the six or eight" may form an areola, although no single puncture might have produced this appearance. The guide upon which so much stress has been laid is the production of an areola from a *single* puncture, and consequently it is desirable, if several punctures be inserted, that there should be space enough between them to prevent the spread of inflammation from one to the other, that the criterion may not be destroyed.

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* Remarks on the Practice of Vaccination, by Dr. GREGORY. (London Medical and Physical Journal, November 1826.)

Provided the other directions are complied with, Dr. Gregory is perfectly indifferent "whether little or much blood flows from the wounds."—Here again we are at issue. From my own observation I am induced to believe that, the less the flow of blood, the greater the probability of success; and I am much deceived if this is not the general opinion of the profession. In a copy of Dr. JENNER's work on Vaccination, I find a manuscript note, in the hand-writing of Dr. BATEMAN, from a paper of Dr. G. FORDYCE on Variolous Inoculation, which is exactly in point, as it bears with equal force on vaccination. "I apprehend (says Dr. Fordyce) that the *principal*, if not the *only*, consideration in inoculation, is *the manner of making the puncture*, which should *penetrate the scarf skin*, so that it may be felt on raising the point of the lancet: *if no blood appears, the better.*" It would be very easy to accumulate evidence in support of this opinion, if it were necessary.

Dr. Gregory objects to more than six or seven subjects being vaccinated "from even a very tumid eighth-day vesicle."—I believe there can be no impropriety in vaccinating many more, if there should be any scarcity of matter. He also informs us, that "it is obvious that, the younger the lymph, (fourth or fifth day,) the greater is its degree of intensity." I doubt this fact as applied to the vaccine lymph. If we were to search for analogies from the perfect development and formation of other morbid poisons, we should find many reasons to suppose the dogma of Dr. G. erroneous. That he is also opposed to the general opinion upon this subject, may be presumed from the eighth-day vesicle being usually preferred; and upon this point, indeed, Dr. G. appears to be *impar sibi*; for, in his recommendations to young vaccinators, he directs them to take lymph "of the sixth, seventh, or eighth day," when, according to his own doctrine, it is no longer at "its greatest degree of intensity."

Dr. Gregory states that the degree of local inflammation and general distress will not be increased by the number of punctures he recommends. In several cases, however, I have seen very severe and unmanageable inflammation, and great general disturbance, from the practice of making numerous punctures. I believe such instances are by no means common; but as troublesome symptoms rarely, if ever, occur, either locally or generally, from the insertion of two or three punctures made at proper distances from each other, and as no greater degree of security is conferred by increasing that number, I should never adopt the plan recommended, as it exposes the child (particularly if it be of an irritable constitution) to an unnecessary risk. I believe it to be the same with respect to the vaccine as the variolous disease: the latter is as completely produced by one puncture as by many. But, to keep up the necessary supply of vaccine lymph, and to render the success of the operation more certain, as one puncture may entirely fail, two or three are usually made. If but one puncture is applied, it ought not to be disturbed.

If the observations on Vaccination had proceeded from a less respectable source, I should not have replied to them: but the opinions of Dr. Gregory, particularly upon a subject to which he has devoted so much of his attention, ought not to pass by unnoticed, as they will be considered very safe guides by, at least, the junior members of the profession.

To offer any apology to Dr. Gregory for having thus unreservedly commented upon his doctrines, would be to imply the unjust suspicion that he is not actuated by that zeal for his profession, which must rather approve than deprecate the utmost freedom of discussion amongst all its members.

J. NORTH.

Upper Berkeley-street, Portman-square; November 10th, 1826.

Necrology.—Some of the most distinguished ornaments of our profession, both at home and abroad, have died during the last few months.

LAENNEC, so well known for his application of mediate auscultation to the diagnosis of diseases of the chest, died in September. Although we are among those who think the value of the stethoscope is at present very greatly overrated by some, still we are ready to do justice to the talents and industry of M. Laennec, and to the great mass of pathological information he had acquired. It is to the practical knowledge acquired by many years of industrious research, *without the stethescope*, that in our opinion may be attributed the reputation which he afterwards gave to this instrument,—many ascribing to it the result of thirty years' patient investigation and laborious study.

Lauth, Professor at Strasbourg, known as the author of various anatomical and other works, is lately deceased.

Vacca Berlinghieri, the distinguished Professor of Pisa, likewise died in September; and Scarpa, the father of Italian surgery, has terminated his long and brilliant career.

To this list of distinguished men, we have to add the name of Dr. Barclay, of Edinburgh. He had been a lecturer on anatomy for about thirty years, and his learning and industry were shewn by various professional works, and by the collection of an extensive and valuable Museum. He died on the 21st of August, in his sixty-sixth year.

Animal Magnetism.—The members of the profession in this country will be amused to learn, that the Academie de Medecine of Paris has very recently established "*une Commission permanente, pour s'occuper du Magnetisme Animal,*" Credat Judæus!

Literary Notice.—Dr. Reece has in the press, An Examination, Chemical, Physiological, and Therapeutical, of Dr. King's Pamphlet, entitled "Observations on the Artificial Mineral Waters prepared by Dr. Struve at Brighton," with practical remarks on the medicinal virtues of the waters, and an analysis of the cases in which it is said they have proved beneficial.

MONTHLY LIST OF MEDICAL BOOKS.

[No books can be entered on this List except those sent to us for the purpose; as, in the list hitherto transmitted, the names of works have frequently been given as published, which have not appeared for weeks, or even months, after.]

Materia Indica, or some Account of those Articles which are employed by the Hindoos, and other Eastern Nations, in their Medicine, Arts, and Agriculture: comprising also a Formulæ, with Practical Observations, Names of Diseases in various Eastern Languages, and a copious List of Oriental Books immediately connected with general Science, &c. &c. By Whitelaw Ainslie, M.D. M.R.A.S. late of the Medical Staff of Southern India.—2 vols. 8vo. London, 1826.

A New Supplement to the Pharmacopœias of London, Edinburgh, Dublin, and Paris; forming a complete Dispensatory and Conspectus; including the new French Medicines, as well as Herbs, Drugs, Compounds, Veterinary Drugs, Patent Medicines, Perfumery, Paints, Varnishes, and similar Articles kept in the Shops; with their Composition, Uses, Doses, and Adulterations; being a general Book of Formulæ for daily Reference in the Laboratory, and at the Counter. By James Rennie, A.M. Surgeon.—8vo. London, 1826.

A Treatise on Desk Diseases; containing the best Methods of Treating the various Disorders attendant upon Sedentary and Studious Habits, with a variety of Prescriptions adapted to each particular Affection. By W. M. Wallace, M.R.C.S. —8vo. London, 1826.

An Introductory Lecture on Human and Comparative Physiology, delivered at the New Medical School in Aldersgate-street. By Peter M. Roget, M.D. F.R.S. &c.—8vo. London, 1826.

An Introductory Lecture on Anatomy, delivered at the New Medical School in Aldersgate-street, Oct. 2, 1826. By Frederick Tyrrell, Surgeon to St. Thomas's Hospital and to the London Ophthalmic Infirmary.—8vo. London, 1826.

Practical Observations on the Teeth and Gums, with the best Mode for their Preservation. Dedicated by permission to John Alderson, Esq. M.D. by I. L. Levison, Surgeon-dentist, late of 54, Berwick-street, Oxford-street.—8vo. London, 1826.

METEOROLOGICAL JOURNAL,

From November 20th, to December 20th, 1826.

By Messrs. HARRIS and Co. Mathematical Instrument Makers, 50, High Holborn.

November.	Moon.	Rain gauge.	Thermom.			Barometer.		De Luc's Hygrom.		Winds.		Atmospheric Variations.		
			9 A.M.	MAX.	MIN.	9 A.M.	10 P.M.	9 A.M.	10 P.M.	9 A.M.	10 P.M.	9 a.m.	2 p.m.	10 p.m.
20			44	47	42	30.24	30.33	85	93	NE	NE	Cloudy	Cloudy	Cloudy
21			45	46	40	30.35	30.33	75	86	NE	NNE	—	—	—
22	☾		44	46	43	30.27	30.17	77	81	N	N	—	—	—
23			44	49	43	29.97	29.76	93	83	NNE	NE	—	—	Sm. Ra.
24			45	47	32	29.41	29.31	90	80	WSW	WSW	—	—	Fine
25			38	43	28	29.08	29.11	74	89	WSW	WSW	Fine	—	Cloudy.
26			31	36	30	29.21	29.40	75	83	WSW	W	—	Fine	Foggy
27			33	37	32	29.60	29.64	83	88	W	SW	—	—	—
28			35	48	47	29.68	29.43	91	96	WSW	SW	Foggy	Sm. Ra.	Sm. Ra.
29	●		48	50	43	29.28	29.31	87	93	SW	SW	—	Fair	Rain
30			46	48	36	29.28	29.40	94	94	WSW	W	Cloudy	—	Foggy
Dec.														
1			45	46	39	29.33	29.13	93	97	WSW	WSW	—	Rain	Rain
2			42	47	39	29.10	29.10	87	87	WSW	W	Fair	—	Fair
3			40	45	34	29.29	29.31	84	85	W	W	Cloudy	Cloudy	Cloudy
4			37	39	35	29.31	29.61	88	82	WNW	NW	—	—	—
5			40	41	33	29.62	29.56	84	89	NW	NW	—	—	Rain
6	☽		36	50	50	29.60	29.62	98	98	ESE	SSW	Rain	Rain	—
7			52	54	47	29.50	29.33	99	98	WSW	SW	—	—	Cloudy
8			50	52	42	29.20	29.45	90	88	SW	W	Cloudy	Cloudy	—
9			42	48	47	29.76	29.73	92	97	W	S	—	—	Rain
10			52	54	49	29.74	29.80	99	97	SSW	S	Rain	Rain	Cloudy
11			52	53	46	29.73	29.80	98	95	SSW	SSW	—	Fair	Fair
12			50	51	44	29.71	29.46	95	94	S	SSE	Fair	—	Cloudy
13			48	52	43	29.48	29.49	97	97	SW	SW	—	—	—
14	○		46	50	45	29.49	29.52	91	92	SW	S	—	—	—
15			47	49	45	29.58	29.56	90	97	SE	E	Foggy	—	—
16			47	49	44	29.47	29.60	98	97	E	E	Cloudy	—	—
17			45	46	41	29.75	29.84	98	94	E	ENE	—	—	Fair
18			42	43	40	29.87	29.92	89	85	E	E	—	—	—
19			42	44	40	29.92	29.94	87	90	E	ENE	—	Cloudy	Cloudy

The Rain-gauge having frozen, no account was taken of the quantity of Rain fallen.

TO THE READERS OF THE MEDICAL AND PHYSICAL JOURNAL.

The first volume of the New Series has now been completed, and the Editor cannot suffer the opportunity to pass without expressing his sense of obligation to those Gentlemen by whose co-operation and support he has been enabled to carry the proposed plan into effect.

The principle of preserving an authentic record of the most interesting Cases *occurring at* Public Institutions, *and giving a correct account of the* Observations *made by the Medical Officers, was obviously good; but it remained to be ascertained how far those Gentlemen, who had in the first instance consented to the arrangement, would persevere under the misrepresentation and obloquy which it was anticipated, as a matter of course, would be heaped upon them. This circumstance alone rendered the undertaking one of some anxiety to the Editor. The experiment, however, has proved eminently successful: the venom of the shaft is no longer mistaken for the strength of the bow; and the Editor has had the gratification to find that the Contributions to the Original Department, so far from having diminished, have greatly increased both in number and value since the commencement of the New Series.*

It may be proper to state with regard to the Cases from Hospitals and other Public Institutions, that either the MS. or the proof-sheets have been revised by the Gentlemen whose observations have been detailed; the Editor is therefore persuaded that no material inaccuracy will be found in these Reports, in which is recorded the experience of some of the most eminent Practitioners in the metropolis.

It may not be irrelevant to add, that the Editor is informed by the Proprietors that the change has likewise been highly beneficial to them; the sale of the Journal having progressively increased since July; a circumstance gratifying to the Editor, as it may fairly be regarded as showing that the arrangements adopted in the New Series have met with the approbation of his professional brethren.

NOTICES.

After a careful perusal of Dr. N.'s *Paper on the* "Source and Identity of the Principle of Animal Life," *we feel ourselves obliged to decline it, as of a nature too speculative for this Journal.*

Communications have reached us from Mr. Cleghorn, Mr. Abrahams, *and* Dr. Bow.

Numerous Papers have been received from Practitioners in London; as these are privately acknowledged, we do not think it necessary to announce them publicly.

ERRATA.—In our last, page 560, line 12 from the bottom, for "liberal" read "liberality;" and in the present Number, page 53, line 26, read "extending nearly to."

THE LONDON
Medical and Physical Journal.

Nº 336, VOL. LVII.] FEBRUARY, 1827. [Nº 8, New Series.

For many fortunate discoveries in medicine, and for the detection of numerous errors, the world is indebted to the rapid circulation of Monthly Journals; and there never existed any work, to which the Faculty, in Europe and America, were under deeper obligations, than to the Medical and Physical Journal of London, now forming a long, but an invaluable, series.—RUSH.

ORIGINAL PAPERS,
AND
CASES OBTAINED FROM PUBLIC INSTITUTIONS AND OTHER AUTHENTIC SOURCES.

CONGLOBATE GLANDS.

Observations on the Interior Structure and Economy of the Conglobate Glands. By JOHN CHARLES OGILVIE, M.D.

As to the distribution and the exterior form and structure of the conglobate glands, there seems to be little, if any, difference of opinion, and our ordinary descriptions of them may therefore be confided in as sufficiently accurate. They are likewise as full and minute as most other parts of anatomy. With respect to the interior structure of these glands, however, and the particular functions which they may be supposed to perform in the animal economy, the case is different: of these our knowledge is very limited. Considerable differences of opinion have always existed, even among anatomists and physiologists of the first character; and it appears to me that the few facts which have been ascertained and generally admitted, have not met with that attention which they deserve, as illustrative both of physiology and pathology, as well as of the operation of medicines on the animal economy.

As far as I can learn the present state of opinion on this subject, all seem to allow that the vasa inferentia,—i. e. the lacteal or lymphatic vessels which carry the chyle or lymph into the glands, are divided and subdivided to an extreme degree of minuteness, as they pervade the substance of the glands; but there seems to be a wide difference of opinion as to the manner in which these minute ramifications of the vasa inferentia are ultimately disposed of. Some contend that the gland is made up entirely of convolutions of lymphatic vessels, intermixed with the minute ramifications of arteries, veins, and nerves; and that these are merely connected or bound together by common cellular membrane. The advocates of this opinion seem to think that the vasa inferentia, after dividing to a great extent of minuteness, and thus forming many convolutions, again unite into larger and larger branches, to form what are called the vasa efferentia,—viz. those lacteal or lymphatic vessels which carry the chyle or lymph from the gland, on its route towards the sanguiferous system. Others again maintain, that, besides this minute division and subdivision of the lacteal and lymphatic vessels in the substance of the glands, and their connexion with the still more minute ramifications of arteries, veins, and nerves, there is likewise a peculiar cellular structure,—i. e. a congeries of cells, proper or peculiar to these glands, and quite distinct and different from the common cellular substance by which this and all the other textures of the gland, and of the whole body, are bound together. Into these distinct and peculiar cells the extremities of the vasa inferentia are supposed to open and pour their contents; and from the same cells these fluids are supposed to be again absorbed by the minute beginnings of the vasa efferentia.

The latter of these opinions seems to have been for many years by much the more prevalent; and that there is such a cellular structure as I have just now mentioned, has been proved both by the late Mr. Cruickshank, in his work on the Absorbent System, and by Mr. Abernethy, in a valuable paper in the Philosophical Transactions for 1795. The former observes, that, when a gland is completely injected, it appears to consist merely of convolutions of vessels; but that, when it is about half filled with mercury, thrown in through the vasa inferentia, the cells are often very evident. When the injection is pushed far, the mercury is forced into the numerous ramifications of vessels which circulate on the parieties of the proper cells, and in the common cellular substance of the gland. When a gland is examined in this state, the numerous convolutions of vessels in a manner hide the cells from our view; and, even when the cells are seen, they are so covered with injected vessels as to be readily mistaken for mere convolutions of vessels. Mr. Cruickshank mentions, however, that he had injected many glands in which there was not the least appearance of a convoluted vessel; but adds, that he never injected one in which he did not see some cells, especially if he was attentive to the mercury just as it entered the gland. "In quadrupeds," he observes, "it is very easy to demonstrate this cellular texture."*

Mr. Abernethy injected the lymphatic glands of the axilla and groin of a horse with wax, and then destroyed the animal matter by immersing it in muriatic acid. In some of the glands the wax appeared in very small portions, and irregularly conjoined; which, he remarks, is a convincing proof that it had acquired this irregular form by having been impelled into numerous minute cells In various other instances, he found one solid lump of wax after the destruction of the animal substance; and he was satisfied that the glands which were filled in this manner were formed internally of one cavity, and were not, as is commonly the case, composed of many minute cells. He likewise filled glands of this structure in the mesentery of the horse with quicksilver; then dried them, cut open the bags, and introduced a bristle into them through the vas inferens. Also, in the human mesentery, after having injected the artery, he filled a bag, resembling a gland, with quicksilver; which, on being opened afterwards, was found to contain a mixture of injection and quicksilver,—i. e. a mixture of the injection that was thrown in through the artery, and of the quicksilver thrown in through the lacteal. In the mesenteric glands of the whale, Mr. A. found bags as large as an orange, and distinctly saw both arteries and veins, as well as lacteals, terminating in them by open mouths. The lacteals he mentions as opening into every part of them, and in great numbers. When quicksilver was poured into any of the lacteals which were found near the sides of the bags, it immediately ran in a stream into their cavities. He introduced about a dozen bristles, through as many lacteals, into different parts of two of these bags. These, he observes, were doubtless few in comparison to the whole number which terminated in them; but, as the mesentery was fat, and the vessels small, more could not easily be passed.†

These are but a few of the facts and arguments that have been adduced to prove the cellular structure of the conglobate glands; yet they appear sufficient to show that the glands in question contain certain proper cavities, with which certain vessels communicate by open mouths. These glandular cavities seem in most animals, with whose anatomy we are acquainted, to consist of a congeries of minute cells, communicating readily and freely with each other; but, from Mr. Abernethy's paper, it is evident that they vary greatly, both as to the number and size of the cells or sacs, in different species of animals, and sometimes in the same species, or even in the same individual. Thus, in the human species, they consist generally, or almost always, of a great number of cells, so very minute as to be distinguishable only with the microscope: while, in the whale, a gland is found to consist of a single bag, sometimes as large as an orange; and a similar organisation is occasionally met with in other animals, —sometimes even in the human subject. Whatever be the size or number of these bags or cells, they are evidently distinct cavities, and not, as some would seem to have supposed, a part of that cellular substance which is common to the whole body, and which enters as a constituent part into the composition of every organ in it. The common cellular substance enters, indeed, into the composition of these glands, as it does into that of every other part of the body; but it is quite distinct from the peculiar apparatus of cells which I have just now mentioned. The two textures are as distinct from each other as the air-cells of the lungs, the pelvis of the kidney, or, in short, the proper cavity of any viscus, is from the interstices of the common cellular substance which pervades every part of the viscus, and connects all its parts together.

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* Page 85.

† Phil. Trans. 1796, lxxxvi.—Abridg. xvii. p. 673.

Admitting now, as I think we must do, that the conglobate glands contain certain proper cavities, in which the lacteals and lymphatics terminate by open mouths, we must suppose that these vessels pour their contents into the cavities in question: nor can we doubt of the purpose for which they are made to do so. We can scarcely suppose that the chyle passes into the mass of blood in the same state in which it leaves the intestines. We must suppose something more than the transient action of the gastric and intestinal fluids necessary for the conversion of dead and comparatively gross matter into blood,—into that wonderful fluid, which is not only possessed of life itself, but which diffuses life and vigour through every part of the body. The chyle is considered by physiologists as possessed of a certain degree of vitality, even in the first stages of its formation, before it is taken up from the intestines; and, if certain kinds of dead animal and vegetable matter may acquire even the lowest degree of vitality from the action of certain secreted fluids in the stomach and bowels, it requires no great stretch of analogy to conclude that the vitality thus originally acquired may be essentially increased or exalted by the action of another secreted fluid in the cells of the mesenteric glands. That the cells of the conglobate glands do secrete a peculiar liquor, seems highly probable from all we know of their economy,—from the plentiful supply of blood with which they are uniformly furnished,—from the numerous terminations of arteries which Mr. Abernethy discovered opening into the sacs in the mesenteric glands of the whale,—from the slimy reddish fluid which he found in these sacs,—and from all the accounts that have yet been given of the fluid known by the name of "succus proprius glandularum."

It is more than probable that the chyle undergoes some very important change in this cellular structure, which I have represented as proper to the mesenteric and other conglobate glands; and analogy seems fully to warrant the inference that a corresponding change is effected on the lymph in the analogous structure of those glands through which it passes. This inference seems equally admissible, whether we consider the lymphatics as mere absorbents, or as deriving their origin, in part or in whole, from continuity with the arteries. If they be mere absorbents, some such process as I have supposed to go on in the glands seems the only means we have of accounting for the peculiar and uniform character which the lymph is found to exhibit in all parts of the body, and under almost all circumstances. If, on the other hand, we suppose the lymph to be immediately derived from the blood, we can only account for its temporary separation on the supposition of its being destined to undergo some important change before it be again mixed with the general circulating mass; and this supposed action of the glands seems to afford the only probable means of effecting such a change.

All that I have yet advanced seems in unison with the opinion I formerly mentioned as the prevailing one on this subject,—viz. that the chyle and lymph are poured into the cells of the glands by the extremities of the vasa inferentia; are taken up from thence by the minute beginnings, or radules, of the vasa efferentia; and carried by these vessels either directly to the thoracic duct, or into other glands which they are supposed to pervade in the same way as they do the first. Yet I cannot assent to this opinion in all particulars. While I consider it as undeniably proved that both chyle and lymph are poured into the glandular cavities, I think we have reason to believe that this is not the case with the whole of these fluids. I am convinced, on the contrary, that a considerable proportion of each pervades the gland without being effused from its vessels; and, of the portion which is effused into the cells, or other glandular cavities, by the extremities of the vasa inferentia, I doubt much whether any part finds its way back into the lacteal or lymphatic vessels. That a part of these fluids pervades the glands without being poured into their proper cavities, seems more than probable from what Mr. Abernethy observed in the mesenteric glands of the whale. The appearance I allude to is so remarkable, and seems so characteristic of the economy of these glands, that I must give it in his own words.

"Having removed the injection from these bags, I observed, on the inside of them, a soft whitish substance, apparently containing a plexus of lacteal vessels. This substance entered the bags at that part of them which was nearest to the intestines, and went out at the point next to the spine. I now poured some quicksilver into those lacteals which appeared to lead to this soft substance. The quicksilver soon entered the vessels which were contained in it, and thus its nature was ascertained. A number of lacteals having entered one of these bags, were observed to communicate with each other; then again to separate, and form other vessels which went out of the bag. It was some time before the quicksilver passed through the plexus of vessels contained in the bag, but, after having pervaded it, it passed on to a second bag, in which was concealed a similar plexus of lacteals. The quicksilver permeated these last vessels with much greater facility than it did the former, and quickly ran out at the large lacteals which were divided at the origin of the mesentery."*

From this description it is obvious that, in the mesentery of the whale at least, while a part of the chyle is poured out from the vasa inferentia into the proper cavities of the glands, another part of that fluid is made to circulate through the glands, entering them by the vasa inferentia, and leaving them by the vasa efferentia, without being poured into those cavities; and, from the close analogy which this animal bears to all others of the class of mammalia in what relates to the natural functions, as well as from similar bags being found in the horse and in man,—from all, in short, that we know of the structure and economy of these glands,—we must, I think, suppose the resemblance to hold in this respect also, rather than suppose that Nature would vary so widely in one or two minute particulars of a process, in the other parts of which she is so uniform. This is evidently Mr. Abernethy's opinion: for he says that the lacteals which pour the chyle into the bags are similar to those which terminate in the cells of the mesenteric glands of other animals. "There is also (he adds,) an analogy between the distribution of the lacteals in the inside of these bags, and that which we sometimes observe on the outside of the lymphatic glands in general. In either case, a certain number of the vasa inferentia, as they are termed, communicate with each other, and with the other vessels named vasa efferentia."

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* Page 674-5.

If this analogy be allowed with respect to the functions of these glands, it will likewise appear, from a careful perusal of Mr. Abernethy's memoir, that the portion of chyle which is poured into the glandular cavities by the vasa inferentia is taken up again, not by vasa lactea efferentia, but by red veins. He found numerous veins communicating with those cavities by open mouths, which could be for no other purpose but to receive something from them; and that something could only be the chyle which is poured into them by the vasa inferentia, mixed and combined doubtless with the peculiar secretion of the cavities. On the other hand, it does not appear that any direct communication exists between the cavities and the vasa lactea efferentia. Mr. Abernethy says, indeed, that, "when quicksilver was poured into any of the lacteals which were found near the sides of the bags, it immediately ran in a stream into their cavities;" and it is just possible that some of the lacteals, through which he thus injected the bags, may have been vasa efferentia: but, had this been the case, it seems more likely that the quicksilver which was thrown into them would have run on towards the root of the mesentery, than that it would have forced the valves, and taken a retrograde course into the bags. It seems at any rate highly probable that, had these been vasa efferentia, the same force which was sufficient to send the quicksilver back into the bags would have sent it also forward in the ordinary course of the vessels; but this does not appear to have happened. If it had, Mr. A. would certainly have mentioned it, as he mentioned the stream which flowed from the cut vessels at the root of the mesentery, when it was poured into those vasa inferentia which did not communicate with the proper cavities of the glands, but which he describes as communicating directly with the vasa efferentia. These are the only vasa efferentia of which he makes any mention, and, from his account of them, it is obvious that they have no direct communication with the glandular cavities. It is but fair to mention that Mr. A., in the paper now quoted, evidently takes it for granted that there are lacteals which do take their origin from these cavities, and carry off the chyle from them; but there is nothing in his narrative which, in my humble opinion, affords the slightest grounds for such an assumption; nor can I find any other grounds for it but the common, though equally gratuitous, assumption, that the whole of the chyle and lymph pass through the thoracic duct.

From the number of veins which Mr. Abernethy saw communicating by open mouths with the cavities in question, he concludes that a part of the chyle is taken up from them by those veins, and is thus introduced directly into the circulation. This conclusion is indeed so obvious, that I do not see how it can be questioned, or even doubted; and, if a part be taken up by veins, the whole may be so. If no other channel can be pointed out through which any part of the chyle gets from these glandular cavities into the venous system, we cannot avoid the conclusion that the whole is taken up by those "numerous veins" which have been so distinctly seen opening from the cavities, for no other conceivable purpose than that of absorbing their contents.

I have already stated my reasons for believing that the structure observed by Mr. Abernethy in the mesenteric glands of the whale, is not peculiar to that animal; that, on the contrary, there is a close analogy between the glandular bags described by him and the cells in the conglobate glands, as well as between the lacteals which pour chyle into the bags and those which terminate in the cells of ordinary conglobate glands; and that there is a similar analogy between the distribution of lacteals on the inside of the bags in the whale, and those convolutions of the same vessels which are met with in such numbers on the parietes of the cells of ordinary conglobate glands. In further proof of this analogy, and more especially as a proof that it holds not only with respect to the glandular cavities and the lacteal vessels, but likewise with respect to the absorption of chyle from those cavities by veins, I may mention that the idea of a communication between the lacteals and the vena portæ in man and other animals is by no means a recent invention; nor does it rest solely on opinion or reasoning from analogy. Nearly two hundred years ago, it was found, on tying the trunks of the lacteals, that the chyle passed into the vena portæ. Early in the last century, and repeatedly in the course of it, quicksilver, thrown into the absorbents of the stomach, intestines, and spleen, was observed to pass into the vena portæ;[*] and, although the existence of any such communication between the absorbents of the alimentary canal and the vena portæ[†] has been positively denied by some of the most respectable writers of a subsequent period, it seems now to be proved beyond doubt.

On the authority of Professors Tiedemann and Gmelin, we are informed that M. Fohmann, dissector at the anatomical theatre of that university, and who has long been employed in examining the excretory glands of the intestinal canal and the absorbents, saw the quicksilver with which he had filled the lacteals of two seals force its way into the vena portæ; and that in subsequent experiments, performed with the greatest care and circumspection, in presence of Professors Tiedeman and Gmelin, on two dogs, one horse, one cow, and three human subjects, the injection (which in all was begun soon after death) reached the branches of the mesenteric veins and the vena portæ, without any external force being employed. On a closer examination, it turned out that the communication of the lacteals with the veins of the intestines took place in the mesenteric glands, and that all the veins proceeding from a gland which was filled with quicksilver also contained it.[‡]

It may be objected to the conclusions which have been drawn from these experiments, that the quicksilver may have found its way into the veins in consequence of rupture of the lacteals; but it seems very improbable that this fluid, when thrown thus gently into the lacteals, should not only rupture them, but the veins likewise, and then force its way into such flaccid vessels as the latter are known to be. It is very im-

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[*] Joh. Walæus[*] found, on tying the trunks of lacteals, that the chyle passed into the vena portæ; Rosen and Wallerius,[†] J. F. Meckel,[‡] J. F. Lobstein,[§] and G. C. Lindner,[§] perceived, on filling the absorbents of the stomach, of the intestinal canal, and of the spleen, with quicksilver, that it passed into the vena portæ; Astley Cooper[¶] also found quicksilver in the vena portæ, after injecting with it the absorbents of the mesentery. (Edinb. Med. and Surg. Journ. xvii. 462-3.)

[†] Haller, Mascagne, Cruickshank, Lieutaud, Portal, Soemmerring, Hewson, and others. (Ibid. 463.)

[‡] Edinburgh Med. and Surg. Journal, xvii. 463.

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[*] Epistolæ duæ de Motu Chyli et Sanguinis ad Th. Bartholinum, in Bartholini Anatomia, edit. 5. p. 7, 8, 9.

[†] De Excitentia Vasorum Absorbentium in Intestinis.—Upsal, 1731.

[‡] Nova Experimenta et Observationes de finibus Venarum ac Vasorum Lymphaticorum.—Berlin, 1772; p. 5.

[§] De Liene.—Argentorati, 1774.

[‖] De Lymphaticorum Systemate.—Hal. 1787-8.

[¶] Med. Records and Researches selected from the Papers of a Private Medical Association.—Lond. 1798; vol. i.

probable that this should happen in any one instance, even if the quicksilver were thrown into the lacteals with considerable force. It is still more unlikely to have happened in every one of the seven bodies that were subjected to the experiment, and more especially so as we are assured that no external force was employed.*

These experiments of M. Fohmann, and the observations of Mr. Abernethy on the mesenteric glands of the whale, seem mutually to corroborate and illustrate each other. Fohmann's experiments, together with the casual observations referred to as made by others, of both chyle and quicksilver passing from the lacteals to the branches of the vena portæ, seem to put it beyond a doubt that the structure observed by Mr. Abernethy in the whale exists also, with certain modifications, in man and many other animals; and that, in the latter as well as in the former, a part of the chyle is poured by the vasa lactea inferentia into certain bags, or cells, in the substance of the mesenteric glands, from whence it is taken up by the extremities of veins, and carried directly into the circulation. On the other hand, Mr. Abernethy's observations on the mesenteric glands of the whale, of the horse, and of man, enable us to form a distinct idea of the mode in which the communication observed by those other anatomists is probably effected in the glands. M. Fohmann's experiments seem to prove that the veins *do* receive chyle from the lacteals in the mesenteric glands; while Mr. Abernethy's observations and experiments point out the *mode* in which they probably do so.

As a farther evidence of the truth of these observations, I may mention that, from the time anatomists became acquainted with the lymphatic system, many men of the first rank in the profession have considered the thoracic duct as quite incapable of transmitting the whole of the chyle and lymph, even with the aid of those other lymphatic trunks that are found to anastomose with it. If these fluids, then, cannot all pass into the blood through the trunks of the lymphatic system, a part must find some other channel; and if the view I have now endeavoured to give of the interior structure and economy of the conglobate glands be at all correct, these would seem to afford such a channel. It has, indeed, been maintained by many, that the whole of the fluids in question may and do pass through either the thoracic duct itself, or some of the other lymphatic trunks anastomosing with it, and leading into the great veins near the heart; but the diameters of all these trunks taken together bear no just proportion either to the size and number of the vessels which constitute the rest of the lacteal and lymphatic systems, or to the quantities of fluid which we have every reason to believe that this system occasionally transmits in a given time. BOERHAAVE, for instance, mentions a man who drank sixteen pints of wine daily; HALLER gives examples of persons drinking two hundred ounces of mineral waters in a few hours, and passing the whole by urine;* and, from what I have repeatedly heard of the feats performed every season with some of our own mineral waters, I see no reason to doubt the accuracy of these statements. These are quantities which we cannot suppose to pass through tubes of so small diameter in so short a time. It is, indeed, contended that the velocity with which fluids pass through the thoracic duct may be such as to account for its transmitting even these quantities in the time mentioned; and, in support of this opinion, Mr. CRUICKSHANK mentions that the chyle in the lacteals of the mesentery of dogs, in some of his experiments, evidently ran through a space of four inches in a second of time, which is twenty feet in a minute. This would seem, however, to have been but a transient acceleration of its motion, caused probably by the sudden admission of cold air, or by some other irritation attendant upon the experiments: and, on the other hand, some experiments of M. MAGENDIE's gave a very different idea of the velocity with which the chyle passes through the thoracic duct. Upon opening this duct in the neck of an ordinary sized living dog, which had a little before eaten as much animal food as he chose, M. Magendie found the chyle discharged at the rate of about half an ounce in five minutes, or six ounces in an hour; and he says it continued to discharge at this rate as long as digestion continued, which was for a good many hours.† In man, whose organs are on somewhat a larger scale, the quantity of chyle passing through the thoracic duct may be proportionally greater; but to suppose that, in the case mentioned by Haller, two hundred ounces of fluid passed through it in a few hours,—let us even allow six hours,—would be to assign it a rate of above thirty-three ounces in the hour, instead of six or seven, as Magendie's experiments would lead us to expect. Such velocity is perhaps possible. Mr. Cruickshank's observation obliges us to allow that it is so, at least for a few seconds at a time; but it is very improbable that the thoracic duct ever does transmit the quantities of fluid I have mentioned with such velocity, or even that it could do so; especially if we allow that it has, over and above, to transmit the ordinary current of lymph, which is supposed to be constantly passing through it in greater or less quantity. We must therefore suppose that there is some other channel through which matter may pass from the alimentary canal to the sanguiferous system; and (I repeat) the experiments and observations now mentioned seem to show that, whatever other channels there may be, one is through the mesenteric glands.

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* Edinburgh Med. and Surg. Journal, xvii. 463.

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* CRUICKSHANK on the Absorbents, p. 30.

† Precis Element. ii. 164.

Anatomists describe a peculiar fluid as occasionally found in the cellular substance of the conglobate glands, principally in young animals, generally of a whitish colour, sometimes inclining to red, sometimes blue, and occasionally almost black. This fluid, when viewed in the microscope, appears to have globules similar to those found in milk, and has generally been distinguished by the name of the succus proprius glandularum of Haller. It is described as totally different from the absorbed fluid passing through the glands, and is probably a peculiar secretion. It is said to be found in the common cellular membrane which connects together the vessels, nerves, and proper cells of the gland, but authors do not seem to be precise in this part of their description. Haller, who is the authority commonly referred to with respect to this fluid, does not seem to have had a very definite idea of the cellular structure of the conglobate glands, and could not therefore determine the precise seat of this secretion. Indeed, when we find one of the most zealous and inquisitive physiologists of the present day speaking of the fluid as obtained by squeezing the gland between the fingers,* we may conclude that the point in question has not yet been minutely investigated. As we do not find the common cellular membrane endowed with the property of secreting peculiar fluids in any other part of the body, it would seem much more probable that this is secreted by the proper glandular cells. It seems evident, at least, from the foregoing observations and experiments, that there is a peculiar fluid secreted in these cells, and that this secretion is intended to be mixed with, and to act upon, the absorbed fluids which are poured into them by the vasa inferentia, in order to produce in these absorbed fluids certain changes, by which they may be fitted for becoming a part of the circulating mass of blood. There is, I think, equal reason to believe that a similar, or at least an analogous, change is effected in the other portion of the absorbed fluids, which I mentioned as pervading the gland without being poured into its cells,—entering by the vasa inferentia, and leaving it by the vasa efferentia. It is not, indeed, so easy to conceive how the change is effected on this latter portion of the absorbed fluids, as on that which is poured into the proper cells of the gland, and there actually mixed with the peculiar secretions of those cells; but we know, from the analogy of other functions, that a circulating fluid may undergo very important changes in certain situations, without leaving the vessels in which it circulates, and therefore without coming in actual contact—certainly without mixing—with the fluid or fluids which we suppose to be chiefly instrumental in producing those changes. In respiration, for instance, all agree in attributing very important changes in the condition of the blood to the agency of atmospheric air in the lungs; yet no one contends that the blood is poured into the air-cells, or that it is in any way mixed or brought into actual contact with the atmospheric air. On the contrary, it is the universal opinion of physiologists,—and may be said to be demonstrable,—that it passes directly from the terminations of the pulmonary artery into the beginnings of the pulmonary veins. In like manner the chyle and lymph, circulating through the substance of a conglobate gland, may be acted upon by the secretions of that gland, without mixing or coming in contact with those secretions.

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* MAGENDIE, Precis Element. tome ii. 59.

Anatomical observations have shown that the lacteal and lymphatic vessels pervade the glands to an extreme degree of minuteness. The contents of these vessels have therefore, as far as we can see, the same opportunity of intercourse with the secretions of the glands, as the blood in the pulmonary artery has with the air in the cells of the lungs; and the ramifications of the lacteal and lymphatic vessels on the parietes of the glandular cells, appear so analogous to those of the pulmonary artery on the parietes of the air-cells of the lungs, that the analogy most probably extends also to the effects produced on the fluids circulating in the ramifying vessels. If so, the chyle and lymph circulating on the parietes of the glandular cells may be regarded as influenced and altered by the contents of those cells, in a manner analogous to that in which the blood is by the air in the lungs. Of the particular nature of the influence exerted, or the alteration effected in either case, we know little or nothing; but, if we have reason to believe that the blood owes its change of state in respiration principally to the discharge of certain matter by the exhalent extremities of the pulmonary artery, a similar conclusion seems to be equally deducible with respect to the chyle and lymph in the conglobate glands, from what we know of the structure and economy both of these glands and of the lymphatic system in general. It is obvious from Mr. Abernethy's paper, that the vasa inferentia, after discharging a part of their contents into the proper glandular cavities, transmit the remainder to the vasa efferentia, in the same way (for aught we know) as the pulmonary artery transmits the blood to the pulmonary veins; and, although we cannot demonstrate such obvious difference between the contents of the vasa-lactea inferentia and efferentia, as between the blood of the pulmonary artery and veins, we have reason to believe that both the chyle and lymph do undergo important changes in the glands, and that these changes are not confined to a part of the fluids in question, but affect the whole, more or less. It seems, therefore, but reasonable to suppose that the separation of parts which these fluids have been shown to undergo in the glands, is immediately subservient to those important changes, and probably one of the essential means of effecting them; as the separation of the carbon, &c. from the blood in the lungs is of effecting the changes we see this fluid undergo in respiration.

Postscript.—I have received the last Number of your Journal, containing Dr. Rossi's "Remarks on the Communication of the Lymphatic Vessels with the Veins." These remarks, as far as they go, appear to me to confirm very decidedly both the observations of Mr. Abernethy,* and the conclusions drawn from them in the paper I sent you some time ago, "on the Internal Structure and Economy of the Conglobate Glands:" the more so as Dr. Rossi does not seem to be acquainted with Mr. Abernethy's paper. Had he ever seen that paper, or been aware of its contents, he would not have said that "the argument (for the existence of the communication) is only upheld by the passage which the mercury makes into the venous ramifications;" and that, "although the injection evidently shows this passage, yet it may not exist in nature, because it may be owing to the impetus of the injection."† His subjoined dissection of the inguinal glands and lymphatics, in a case of anasarca of the lower extremities, need not, in my humble opinion, shake our belief in the existence of the communication in question. If the view of the subject which I have attempted to give be at all correct, we need not be surprised that Dr. Rossi did not detect lymph in the small veins passing out of the glands, mixed (as it must have been) with the blood of those veins, and altered or assimilated to blood (as it most probably had been) by the process it had previously undergone in the cells of the glands.

Aberdeen; 5th January, 1827.

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* Phil. Trans. anno 1796.

† P. 83.

INJURIES OF THE HEAD.

Cases of Injuries of the Head, treated at the MIDDLESEX HOSPITAL.

(Continued from page 24.)

IN our last Number, we gave some cases of injury of the scalp. These cases show how much the contents of the skull are influenced by the condition of its external coverings, and illustrate the mutual connexion between the scalp, the bone, the brain, and its membranes.

We then proceeded to detail some cases of concussion, and two cases of inflammation of the brain, the remote effect of this injury, were related, with a view to show the masked form which inflammation of the brain frequently assumes after this accident. A fatal case of concussion was also given, and the morbid appearances presented on dissection were described.

We now subjoin another case of concussion, in order to show its several stages, and the utility of the division laid down by Mr. ABERNETHY.

CASE VI. *Concussion of the Brain.* Treated by Mr. JOBERNS.

Charles Cox, ætatis eleven, admitted December 6th, 1826. This boy had fallen thirty feet: he was taken up senseless, and was conveyed to a surgeon, who bled him. When brought here, he still remained in the same state of insensibility, although an hour had elapsed since the occurrence of the accident. He was cold, pale, and pulseless; the pupils were dilated; and his breathing was tranquil. There was a wound of the scalp near the vertex and over the right parietal bone, which was bared of its pericranium. The denuded portion of bone might be somewhat larger than a shilling. In less than an hour he began to show signs of returning sense. He cried violently when his head was touched; but, when left alone, he sunk into his former state of stupor. He lay curled up; his knees and thighs were drawn towards the abdomen, and his head was bent forwards, and hid under the bedclothes. He complained of his right leg, which being examined, the tibia was found to be fractured. His pulse now became more perceptible, and the heat of the surface was returning.

The head was shaved. The dirt was cleared from the wound; the divided parts were brought together by adhesive straps, and the head was covered with an evaporating lotion. He took Calomel gr. iij. with Jalap gr. xij.

7th.—Much in the same state; moaning a good deal, cross and irritable. His pulse had risen somewhat, but was still very weak. As the purgative had not yet operated, he was ordered repeated doses of the house medicine until the bowels were acted upon. By the evening the bowels had been freely opened, but he had passed both fæces and urine in bed. The following mixture was directed to be taken three times a-day:

H. Potassæ Tart. ℥jss.; Vin. Antim. T. ʒss.

8th.—Has been noisy during the night; talks incoherently; there is a dropping of the eyelids, but he says that he has no pain. Pulse about seventy-five, and weak. The wound has partially adhered.

Hirudines xiv. to be applied to the temples.—Calomel gr. iij. Antim. Tart. gr. ¼, to be taken at bed-time.

9th.—He does not sleep, but is crying out continually. He is extremely obstinate, and says that he "will make a noise." He still passes his fæces and urine in the bed, and seems inclined to do any thing but what he is bid. The pulse, although weak, communicates to the finger a peculiar vibratory feel.

Hirudines xij. to be applied to the temples, and to take a dose of Calomel and Jalap.

10th.—The face has become flushed; the skin is hot and dry; and the tongue, for the first time, differs from its healthy condition: it is now covered with a yellowish-white fur, its edge is red. The pulse has the same thrilling feel as yesterday; it is more accelerated, (about eighty-five,) and has acquired some degree of strength.

He was bled to four ounces, and twelve leeches were applied to the temples.

12th.—Continues very noisy, and does not sleep. The pulse was rendered soft by the last bleeding, but to-day has again assumed its former vibratory character.

Six ounces of blood were taken from the arm.

14th.—He improves; slept better last night, and is more rational to-day; cries out less, but is still peevish and irritable. There has been no intolerance of light from the first, and he has never once complained of pain in the head, unless the wound was touched. Pulse eighty, and less vibratory; tongue moist, and covered with a white fur. The adhesions of the wound had all given way, and the bone was found to be rough and bare to the extent already mentioned.

The wound was covered with a poultice, and twelve leeches applied to the temples.

16th.—There is little alteration in the symptoms since our last report. The tongue has begun to clean towards its edges; the pulse has not lost its thrilling character.

Bled to seven ounces.

19th.—He is less irritable, and more under control; he sleeps better, is not so noisy, and is more civil in his answers to questions. Tongue clean; pulse full and regular.

His amendment was now progressive; the wound suppurated kindly, but the bone continued bare. He had no recollection of the accident.

January 5th.—The scalp has united to the bone, and the parts of the wound are all consolidated. He remains in the hospital for the fractured tibia, which has also proceeded very favourably.

In our last Number we gave a case of fatal concussion, in which stertorous breathing was one of the most prominent symptoms. This has been considered by many as a diagnostic symptom of compression. In the case alluded to, however, there was no compression, (at least in its first stage,) yet the stertor was well marked. The following case will serve to show, on the other hand, that there may be considerable extravasation of blood on the brain, and still the breathing may be tranquil.

Case of Extravasation of Blood between the Skull and the Dura Mater.

Richard Smith, ætatis ten, was brought to the Middlesex Hospital, August 24th, 1826, labouring under all the usual symptoms of compression of the brain. It had been caused, as we were informed, by a heavy piece of timber, which, sliding from its resting place, had crushed the boy to the ground. He remained insensible for a few minutes after the accident, and he vomited several times before he was brought to the hospital.

He was pale, cold, and motionless; his pulse was small and feeble; and he was constantly vomiting. On examining the head, a contusion of the scalp was found at about the middle of the parietal bone: there was no wound. The fingers were pressed in upon the tumid scalp, and the bone was carefully examined, but no irregularity in the skull could be detected. From the symptoms present, it was evident that the brain had received a most serious injury. The dangerous condition of the child was represented to the parents, but all our intreaties could not prevail upon them to allow the child to remain in the hospital, and he was therefore visited at home by the house surgeon.

> The head was shaved, and the following draught was ordered to be taken every eight hours:—Magnes. Sulph. ʒj.; Vin. Antim. Tart. m. xx.; Aquæ Puræ ℥j.—The head was covered with an evaporating lotion.—Low diet.

25th.—His bowels had been well opened, but he still lay in the same comatose state as yesterday,—with this difference, however, in the general symptoms, that the skin, which was before pale and chilly, had now become hot and dry; and that the pallid and death-like countenance had given place to the flush and suffusion of general vascular excitement. The pulse was no longer feeble and intermitting, it had become quick and strong, but it was not more frequent than natural. *The breathing was perfectly easy.* The irides acted irregularly, alternately contracting and dilating. If spoken to in a loud tone, and shaken, he could be roused so as to answer questions, but again immediately relapsed into the same state of lethargy. His thighs were drawn up towards the abdomen, and his legs were bent upon his thighs: thus he lay as in a deep sleep. He asked for drink, &c. or for the chamber-pot, if he at any time needed them. He would sometimes roll about in his bed, and moan; and he frequently raised his hands to his head. He was impatient if any attempts were made to open the eyelids, and drew his head away when the injured part of the scalp was touched.

The excited state of the vascular system seemed to call for venesection, and ten ounces of blood were taken from the arm before any manifest alteration in the pulse was produced. After the bleeding, his senses seemed to be partially restored: he opened his eyes, sat up in bed, and spoke to those around him. This favourable change was not of long continuance, he soon again became more insensible. As the vomiting still continued, the antimony was omitted, and the sulphate of magnesia was given in smaller doses.

26th.—He was much more sensible than before the bleeding: he answered questions, and did not complain of pain. He still lay moaning, and regardless of surrounding objects, but he was not so deeply comatose as yesterday; pulse weak, and rather frequent. At four o'clock in the afternoon he became convulsed, and died.

Dissection.—The scalp was turned back, and a quantity of blood was found in the cellular texture under it, where it covers the anterior part of the left parietal bone. Here the parietal bone was fractured, midway betwixt its anterior angles and about an inch posterior to the coronal suture; a small portion of the bone was slightly depressed. From this part a fissure might be traced, which ran in a direction backwards, traversing the posterior part of the parietal bone, and terminating near the base of the skull.

On removing the calvarium, about two ounces of dark coagulated blood were found on the dura mater, under the fractured and depressed portion of the skull; and now it was discovered that two of the main branches of the middle meningeal artery had been torn, yet the dura mater was not perforated. That part of the left hemisphere of the brain upon which the coagulum had pressed was flattened, and appeared to be rather softer in its texture than the surrounding parts. There was a dark spot on the surface of the brain, which corresponded to the depressed portion of bone. There was nothing remarkable in the vascular system of the brain, no injection of the minute vessels, no signs of inflammation.

The above case was accompanied by a train of symptoms of very common occurrence. The patient lies with his legs drawn up towards the abdomen, and with his head and neck bent forwards; his trunk and extremities are thus, as it were, rolled and packed up in the smallest possible compass. He lies as if in a profound sleep, and is averse to being disturbed. You can rouse him so as to answer your questions, but his answers are generally in monosyllables. He gets out of bed to pass his evacuations; and not unfrequently he makes water against the wall, or passes his stool on the floor. He asks for drink, or whatever he may want. *There is no stertor.* The eyelids are closed, and he resists your attempts to open them. The irides are irregular in their action, being at one moment contracted, and at another dilated. Whether these symptoms be those of compression or of concussion, or of either, has not yet been ascertained. Experience has failed to point out the symptoms which distinguish these two affections from one another. Mr. JOHN BELL, with his accustomed felicity of description, has given the above peculiar train of symptoms as indicative of compression; whilst, on the other hand, Sir ASTLEY COOPER has traced them to concussion. In short, no correct diagnosis between compression and concussion has yet been made; so that in another place Mr. J. Bell has it, that "concussion is, like compression, an affection of the whole brain, and, in so far as we know it by symptoms, it is entirely the same." Mr. ABERNETHY also tells us, that, "in cases where there is no interval of sense after the accident, we are at a loss to determine whether the senseless state be the effect of compression or concussion."

Thus, if any inference can be drawn from the cases here related, and from numerous others of a similar kind, we should be induced to say that these symptoms arise from the general injury done to the brain, whether that injury be caused by compression, concussion, or laceration of the brain; and that it is only by the state of the pulse, the duration of the symptoms, and by a minute attention to the general circumstances of the case, that we can hope to distinguish between compression and concussion of the brain.

CASE VIII. *Injury of the Head, attended by Symptoms similar to those of the preceding, and which seemed to indicate Compression of the Brain.* Treated by Mr. JOBERNS.

Patrick Cawdy, a strong Irish labourer, was brought to the hospital July 12th, 1826. He had fallen from a scaffolding, a height of thirty-five feet. He was quite insensible; the pulse was scarcely to be felt; the pupils were widely dilated; but respiration was performed with freedom. He rolled about in the bed, groaned frequently, and often put his hands to his head. If you attempted to open his eyelids, or otherwise disturbed him, he became restless and impatient: he tried to keep his eyelids closed, and drew his hand away when you took it to feel his pulse. He lay with his legs and thighs drawn up towards the abdomen, his head depressed towards his chest.* The scalp appeared to be uninjured, and the only external mark of injury to the head was a bleeding from the left ear, the hemorrhage from which was unusually great.

The head was shaved, and he took a purge of Calomel and Jalap.

His pulse continued weak and slow all day, it did not exceed forty in the minute. If you shook him and attempted to rouse him, he seemed to be annoyed, muttered indistinctly, and drew himself away, and was not satisfied until allowed to resume his former position. He then fell into the same profound sleep as before.

13th.—He continued much in the same state. The pulse was still slow and weak; the pupils were less dilated. As the calomel and jalap had not yet operated, it was repeated, and a common purgative enema was administered. Twelve leeches were applied to the temples; and, as the heat of the scalp had increased, the head was covered with an evaporating lotion.—In the evening, the pulse was at fifty, and had acquired a little more strength. His bowels had been opened during the day, and he had got out of bed to pass his urine, &c. He opened his eyes for the first time, and when roused would speak; but he again instantly fell into his previous state of lethargy.

A blister was applied to the nape of the neck.

14th.—He was somewhat more sensible. You could occasionally, by dint of perseverance, extract answers to your questions, but the answers were generally given in monosyllables; he rolled about in his bed, and talked incoherently. The pulse was somewhat stronger than on the preceding night; the pupils were more contracted.

He took another dose of Calomel and Jalap, and had an aloetic enema.

In the evening, as the pulse had become quicker and less compressible, he was bled to eight ounces, which had the effect of lowering the pulse considerably. During this operation he yawned frequently, opened his eyes as if awoke from a sound sleep, and stared idiotically on those around him.

15th.—The sensorial functions were performed in the same imperfect manner as on the preceding day. He complained of a pain in his head, and his pulse was more frequent; the bowels had not been relieved.

The aloetic glyster was repeated, and he took doses of the house medicine until free evacuations were procured. Ten leeches were applied behind the ears; and he was to take Calomel gr. iij. Antimonial Powder gr. j. three times a-day.

17th.—He had certainly improved: he had become more rational, and was less lethargic. Still he did not seem inclined to answer questions; he was sulky, and grumbled when he was disturbed.

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* When the injury to the brain is not so great as to prove quickly fatal, the patient, as far as our experience goes, almost always lies in the position above described.

19th.—To-day, for the first time, we succeeded in getting him to put his tongue out: it was foul and furred, which condition was probably in part owing to the mercury that he had taken. He still continued to moan and toss about in his bed, and was constantly putting his hands to his head. His bowels were preserved in a lax state by the house medicine and aloetic glysters. He had taken little more than milk and water-gruel since his admission.

22d.—His mouth appeared to be very sore, although he denied that it was so. The calomel and antimony were discontinued. To-day he sat up for the first time. He said that he felt a pain in his forehead. He was sullen, and spoke only when spoken to; he recognised some of his friends.

Fourteen leeches were applied to the temples.

This man continued much in the same state for some time. He constantly complained of his head; he said that he was dizzy, and felt a weakness in the fore part of his head. The treatment consisted in a perseverance in the antiphlogistic means already enumerated,—namely, in local bleeding, blistering, purgative and antimonial medicines.

August 5th.—He was well enough to walk in the garden with the assistance of another man, but, if he attempted to walk alone, he staggered like one drunk.

He was discharged the hospital August 15th. At that time he could walk without assistance; he was quite deaf in the left ear; his intellects were much impaired; his countenance was a complete blank; in short, he was little better than an idiot.

We have since seen him, and found that the sensorial functions were beginning to be restored.

Case of Injury of the Head, attended with Compression from Effusion of Blood beneath the Dura Mater, in a Boy whose Cranium afforded an example of defective Ossification to a great extent. By Mr. BOYLE, Surgeon to the MIDDLESEX INFIRMARY, &c.

ON the morning of the 21st of September, I was called upon to visit Henry Slark, a boy of nine years old, residing in George-street, Grosvenor-square, he having been thrown upon the pavement from a horse, and it being supposed that he laboured under an extensive fracture of the skull. On my arrival, I was informed that the boy's head (to use the words of his friends,) had never closed in front, and that his parents were frequently alarmed by his falling down in the streets without any apparent cause.

On examination of the head, it was found to be of a hydrocephalic form. A large open space was pointed out, commencing at the situation of the anterior fontanel, and widening as it ascended on the right side, in the course of the sagittal suture.

This was stated to have existed from birth; but all the other parts of the head were supposed to have been perfect, except in form, previously to the accident.

The symptoms, which were a total suspension of the mental faculties, stertorous breathing, dilatation of the pupils, with insensibility to light, a low, rapid, and occasionally irregular pulse, and coldness of the extremities, denoting serious mischief. A careful examination of the head was resorted to, and marks of external violence were detected behind the posterior superior angle of the right parietal bone. On pressure being made here with the fingers, a depression to some extent was felt. The surrounding integuments were now (three hours after the accident) greatly tumified; and, as nothing but irregularly projecting boundaries of the injured portion could be distinguished, it was believed by myself and the other gentlemen present, amongst whom were Mr. Jewel and Mr. Love, that broken fragments of bone were driven between the surrounding sound or unhurt parts of the skull and the dura mater. This opinion, however, did not at all regulate the course of treatment adopted. Blood had been taken from the arm, and active purgatives had been administered, without any improvement, but, on the contrary, an increase of the threatening symptoms: it was, therefore, considered expedient, at all events, to divide the pericranium over the apparent seat of the injury, for the purpose of ascertaining and removing, if possible, the immediate cause of mischief. This I accordingly did by two free crucial incisions. The scalp was reflected back; the dura mater was exposed; the action of the brain was seen and felt, but no broken bone was to be found; this part of the dura mater having been originally unprotected, and uncovered by any thing but the scalp. Effused blood, however, (unquestionably the cause of the symptoms,) was found lying on the dura mater, and removed. The distended vessels, now divided, bled freely, and it was necessary to secure three arterial branches.

The parts having been brought together and dressed, the boy gave direct answers to two or three questions, and the pupils evinced a slight degree of irritability on the approach of a lighted candle. The pulse, however, was now extremely weak, hurried, and irregular; and no alvine evacuation had as yet been obtained. Twelve leeches were ordered to be applied to the affected side of the head, followed by cooling lotions; three grains of calomel, and an equal quantity of extract of colocynth, were given; and a purgative enema, containing an ounce of spirits of turpentine, was directed to be administered every two hours, till free and frequent evacuations should be produced.

On the following morning, the boy was irritable and restless, but sensible on interrogation; and the pupils, which were now about their natural size, contracted on the approach of light; the bowels had been freely opened. There was still, however,

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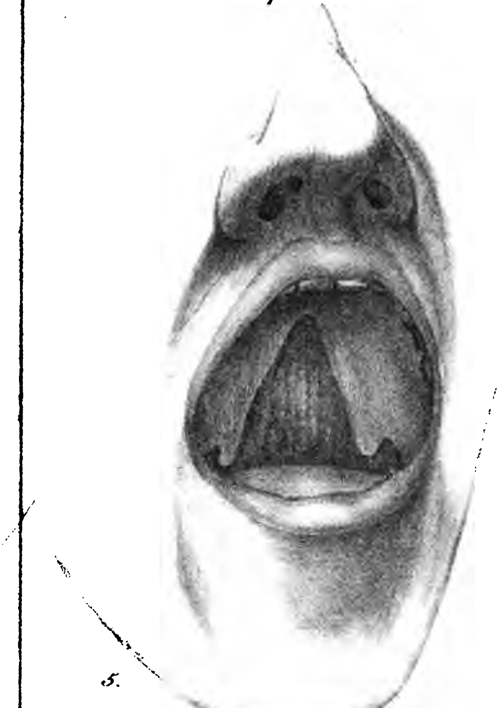

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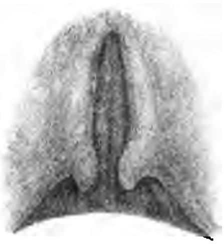

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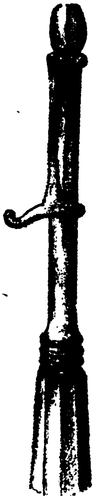

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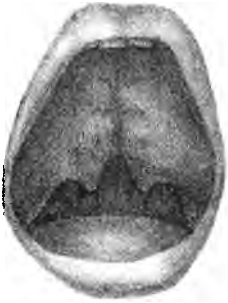

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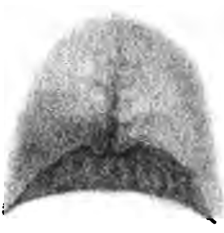

Herbert Mayo, delt

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a good deal of stupor; the pulse was 116, and small; the skin was hot, and there was much thirst. A blister was ordered to the nape of the neck, the saline mixture to be administered, and the strictest attention to the antiphlogistic treatment was enjoined.

From this time there was a gradual improvement, till the 25th, when the boy became extremely restless and feverish, and complained of severe pain in the forehead. Three leeches were applied to the seat of pain, and it was found necessary to repeat them in the course of the day. As no regular sleep had been obtained since the time of the accident, an anodyne draught was administered. These measures were productive of relief and several hours' sound sleep.

No unfavourable change afterwards took place, and on the 1st of October the wound from the operation had quite healed, and the little patient was free from all complaint but debility.

It is worthy of observation that, on the subsidence of the swelling and tension of the scalp, attendant on the violence which it sustained, a vacuity, from a deficiency of the parietal bones, but more particularly the right, was ascertained to exist in the direction of the sagittal suture; being at its narrowest part about two, and at its broadest about four, inches wide. A small tooth-like process secured the posterior superior angle of the right parietal to its fellow, and to the occipital. Posteriorly and inferiorly to this was the more immediate seat of the mischief arising from the accident. Here also an original defect was observed in the ossific process, to the extent of about three inches at its narrowest, and about four and a half at its broadest part; the natural situation of the lamdoidal suture being near its centre. The head, from the nasal process of the frontal bone to the occipital protuberance, measured seventeen inches and three-quarters, whilst its breadth, from the tip of one ear to that of the other, was only eleven inches and three-quarters; affording altogether a curious specimen of the occasional irregularities of nature in the performance of her operations.

4, Cleveland-square, St. James's; Oct. 3d, 1826.

FISSURE OF THE SOFT PALATE.

Case of Congenital Fissure of the Soft Palate.

By Herbert Mayo, Esq. &c.

[with an engraving.]

George Tucker, aged twenty-six, a native of Daventry, applied to me for advice under the following circumstances:—His soft palate had been imperfect from birth; a fissure divided the uvula into two equal portions, and extended to the margin of the palate bone. The soft palate, therefore, consisted of two pendulous flaps, which receded from each other at such an angle that the halves of the uvula were about an inch apart. The appearance of the fissure is represented by fig. 1 of the adjoined Plate.

This patient could neither swallow nor articulate like other persons. Each time that he attempted to swallow a draught of liquid, some of it escaped through the nostrils; and part even of the solid food which he ate made its way through the fissure, so as to rest upon the upper surface of the palate, till he managed to dislodge it. His speech was unpleasant and guttural, not unlike that of a person with an harelip. He could, however, articulate every letter intelligibly, except the letter T.

On being desired to make the effort of swallowing, with the mouth empty and sufficiently open to allow the soft palate to remain visible, the flaps of which the latter consisted were seen to be drawn forwards and towards each other, so as nearly to meet, in the manner represented by fig. 2 of the adjoined Plate. At the third or fourth repetition of this effort, the flaps were observed not to be drawn so close as at the first. He had been in the habit of remarking that, towards the close of a repast, his deglutition became much less perfect than at its commencement.

Every circumstance promising success, I recommended him to undergo an operation, to which he cheerfully agreed: it was performed on the 8th of last December, with the assistance of Mr. Cooper and Mr. Fieldsend, two gentlemen at present attending the lectures in Great Windmill-street.

The edge of either flap of the soft palate was removed with a thin double-edged scalpel, the part to be removed being fixed by means of Assalini's tenaculum; little more than the membrane covering the edge of each flap was taken away. Four sutures were employed. The ligatures were introduced by means of a small curved needle, fixed in a strong porte-aiguille. The ligatures passed through the middle of the cut surface, and pierced the membrane at the distance of four or five lines from the cut edges. The three upper ligatures were drawn tight, and tied, in succession. The lowest, when drawn tight, produced coughing and a sense of suffocation: it was loosened to relieve these symptoms, and afterwards tied in such a manner as merely to hold the cut surfaces at that part in apposition.

On the evening of the 8th, the part presented a favourable appearance. The patient swallowed the small quantity of liquid food allowed him, without the return of any part by the nostrils.

9th.—The uppermost and the lowest ligatures had produced more ulceration than the others.

10th.—The two uppermost ligatures were removed.

11th.—The remaining ligatures were removed: every part of the line of union appeared to hold.

12th.—The inflammation and soreness had diminished. Parts of the uniting substance, and the holes through which the ligatures were drawn, had a foul appearance, and were touched with balsam of Peru applied on a camel's-hair pencil.

13th.—The general appearance of the part was improved; but a hole, a line in diameter, had dropped through the upper part, and a larger hole appeared immediately above the uvula. The surfaces were touched with a weak solution of lunar caustic.

The hole at the upper part of the line of union closed spontaneously in the course of a few days: that above the uvula continued to enlarge, and in three days the adhesion of the parts of the uvula gave way. Two-thirds, however, of the original fissure had firmly united, presenting the appearance delineated in fig. 3. The patient could now swallow solid food perfectly, and his deglutition of liquids remained much improved; but something had certainly been lost, since the lower part of the adhesion gave way. On his taking a draught of liquid, some drops were again found to escape by the nostrils The patient, notwithstanding, was less disappointed at the partial failure of the operation, than encouraged by its general success to desire its repetition upon the part which had become disunited.

Accordingly, on the 31st of December, in the presence of my friends, Dr. WARING, Mr. HAWKINS, and Mr. ROWLANDS, I removed the edges of the remaining fissure, and sewed it together with two ligatures.

January 1st.—The ligatures had caused considerable ulceration on the left side.

2d.—The upper ligature was removed in the afternoon; and in the evening I took away the lower, which had nearly cut its way through upon the left side. The patient was directed to swallow nothing till the following morning.

3d.—The appearance of the parts was favourable. The adhesion seemed least perfect near the upper angle of the wound.

4th.—A small hole appeared above the uvula, which enlarged in the course of two days to two lines in length and breadth. The surface now became clean, and granulated, but the hole remained stationary.

On the 9th, I added two glasses of port wine to his diet of broth and jelly, and arrow-root; and directed him to hold the wine some time in his mouth, that it might operate as an astringent application upon the part. The hole now began to close rapidly, and by the 14th, when he expressed a wish to return to his family, had contracted to less than a line in diameter; so that it appeared to me needless to detain him the few days longer in town, which would have given me the satisfaction of seeing the part entirely restored.

In fig. 4, the appearance of the soft palate eleven days after the operation is delineated.

He can now swallow perfectly, and is able to articulate his own name distinctly, which he had previously pronounced "Ucker:" the guttural tone, however, in which he speaks remains unchanged, and probably will continue so.

On reviewing the details of this case, I should be inclined to deduce from it the following advice with regard to the management of another; and, although the rules may appear trivial and obvious, and may be inapplicable to many instances, they are at any rate not likely to mislead, when stated in connexion with the facts which suggest them.

1. A patient should have lived as heartily as usual, or nearly so, up to the day of the operation, in order to bear the prolonged abstinence which is requisite afterwards.

2. On the day of the operation, and on the following, the patient should take a moderate quantity of liquid nourishment.

3. All the ligatures require to be removed by the third day: during the ensuing two, three, or four days, the patient should submit to the most rigorous abstinence, taking no more than a few table-spoonfuls of broth or a melted jelly twice in twenty-four hours.

4. The ligature should consist of a single thread, rendered double by passing through the needle. The ligature should pierce the membrane of the fauces at five lines from the cut edge, and be carried through the middle of the substance of the soft palate.

5. The ligatures should be drawn tight:—if they are merely drawn till the cut surfaces are brought into contact, the ulceration which immediately follows is liable so to loosen them that the first adhesion may be partially dissolved or materially weakened.

6. In the event of a hole appearing in the line of union, no local application should be used till the surface has become clean and granulating.

7. The substance of the soft palate is of great toughness, and requires that the needle employed to perforate it be very firmly fixed in the port-aiguille. But, as soon as the needle is introduced, considerable irritation occurs, rendering it necessary to complete the operation of drawing the ligature through as quickly as possible. For this purpose, the point of the needle may be readily seized with forceps:—but it is not equally easy to disembarrass the port-aiguille of the ring which secures the needle in its socket. A simple contrivance might remedy this defect in the common port-aiguille. A second ring (as represented by fig. 5,) might be added to the instrument, connected to the first by a slide, and having a projection, upon which the thumb might operate with sufficient purchase.

19, George-street, Hanover-square; Jan. 15, 1827.

ACUTE RHEUMATISM.

Remarks on Acute Rheumatism; with Cases. By ANTHONY TODD THOMSON, M.D.

THE violence of the pain, the crusted state of the blood drawn from the arm, and the hard, quick, bounding, pulse which attend acute Rheumatism, have led medical writers to regard this disease as a purely inflammatory affection. Observation, however, and the experience of the present day, have justly thrown doubts upon the inflammatory nature of Rheumatism, and altered the mode of treating the disease. The use of the lancet is now rarely resorted to, except in cases where there is, naturally, a strong, rigid state of fibre, and that condition of the habit which is indicative of the inflammatory diathesis; for practitioners have found that bleeding in acute Rheumatism neither lessens the buffy appearance of the abstracted blood, however often the operation may have been repeated, nor diminishes the sufferings of the patient, unless the lancet be aided by narcotics, or other remedies which generally relieve pain.

The striking resemblance of acute Rheumatism to Ague was long since noticed by HULSE, MORTON, and many other eminent physicians, and treated with Cinchona bark on that account. The pain, when the disease is left to run its course undisturbed, recurs periodically every night or every morning, once at least in twenty-four hours. If the rigors be less obvious than in Ague, the sweats are frequently more so, and both are generally present in the rheumatic paroxysm. The appearance of the blood is the same in both diseases; and one of the most striking diagnostic marks in acute Rheumatism, the sediment deposited in the urine, is also present in Ague. The dread of metastasis led, we believe, to the discontinuance of the use of the bark as a remedy in acute Rhematism; but experience has demonstrated that this dread is unfounded, and where the employment of this remedy has been prefaced by the exhibition of Calomel, Tartar-emetic, and Opium, with cathartics, I have had no reason whatever, in a practice of twenty-five years, to alter my opinion of its efficacy and safety. The following cases, selected from my Case-book, show the manner in which I have exhibited it, and the result of its combination with other remedies.

Case of Acute Rheumatism affecting the Forehead, (Cephalea auctorum.)

November 20th, 1820.—Miss Francis G—, ætatis twenty-five, of a dark complexion, and tall, spare habit of body, with a profusion of black hair, had been for some weeks labouring under a slight catarrhal affection previous to the 12th instant, on the morning of which, after being exposed to a current of moist air on the previous evening, she suddenly felt a severe pain at the inner angle of the left orbit, directly behind the eyelid, which was slightly swelled. The pain gradually extended over the eyebrow, and along the brow: it continued until the evening, when it disappeared; but returned next morning, with as much severity as on the preceding day, and continued until the evening, when it again went off; and, in this manner, recurred daily up to the period of my advice being requested.

I found Miss G— suffering greatly from the pain; the eyelid was swelled; the eye itself slightly suffused; the pulse small, hard, and eighty; and the tongue covered with a white fur. The bowels were regular; the appetite not diminished; and, as she was free from pain, her nights were undisturbed. She was not sensible of any rigor or shivering at the accession of the pain, which always occurred before she rose from bed; but the paroxysm terminated with evident perspiration. The urine was scanty and high-coloured.

℞. Submuriatis Hydrarg. gr. viij.; Ext. Hyosciami gr. v. fiant pilulæ ij. horâ somni sumendæ.—℞. Sodæ Tartarizatæ ʒj.; Sodæ Carbonatis ʒss.; Infusi Sennæ f.ʒix.; Vini Colchici f.ʒj.; Tinct. Aurantii f.ʒj. M. ut fiat Haustus, in effervescentis actu c. Solutionis Acidi Tartarici cochl. ampl. j. primo cras mane et sextis horis sumendus.

21st.—The bowels have been actively purged, and much dark bilious matter passed. The pain, this morning, came on rather later than usual, but it is as severe as ever: both the eyelid and the forehead over the eyebrow are covered with a reddish tinge or blush; the eyeball is exquisitely painful, and the slightest pressure on the spot where the supraorbitary artery turns out of the orbit cannot be borne. The eye, also, of the affected side cannot be directed to the light, and is in a constant, involuntary, rolling motion. The tongue is more coated than yesterday; and the pulse eighty, small, and softer than yesterday. The temple throbs when the pain is severe.

℞. Submur. Hydrargyri gr. iv.; Antimonii Tart. gr. j.; Opii gr. vj.; Muc. Acaciæ q. s. ut fiant pilulæ æquales quatuor, quarum sum^{r} j. sextis horis urgente dolore.—℞. Olei Terebinthinæ f.ʒiv.; Muc. Acaciæ f.ʒvj.; Pulv. Cinchonæ Cordifoliæ ℈ij.; Tinct. Cinchonæ comp. f.ʒiv.; Infusi Cinchonæ f.℥ivss.; Syr. Papaveris f.ʒij. M. ut fiat mistura, sum^{r} cochl. amp. iij. quarta quâque horâ absente dolore.

22d.—She took three of the pills only, as the pain left her much earlier than usual. She does not nauseate the mixture, and has continued to take it up to this time, (ten o'clock A.M.) as the pain has not yet recurred. The bowels continue lax; the tongue is less furred; and the pulse only seventy-five, and fuller.

Pergat in usu medicamentorum.

23d.—The pain returned yesterday at three o'clock, but it was more supportable than before. She says she feels in every respect better. The oleum terebinthinæ has not affected either the kidneys or the skin, although the violet odour is present in the urine.

Contin^{r} medicamenta.

24th.—Had no return of the pain yesterday, and considers that she is well. She was ordered to discontinue the pills, but to persevere in the use of the terebinthinate and bark mixture twice a-day, for four days; after which, there being no recurrence of pain, it was discontinued, and she was ordered to take, in its stead, the simple acidulated infusion of Cinchona for ten days. The disease did not return.

II. *Case of Acute Rheumatism affecting the whole Head.*

31st October, 1823, I was roused out of my bed to attend Miss C—, ætatis twenty-three, of a fair complexion, with light hair, a full habit of body, and endowed with great intellectual powers. The weather was damp, windy, and variable in temperature.

Miss C— complained of great pain over the whole of the head, so excruciating that she was afraid to go to sleep. This pain, which was preceded by a slight shivering, came on at ten o'clock this evening, and has continued to increase in violence until now (midnight). Her skin is not hot, her feet are as cold as marble; and she says that, besides the sensation of pain, her head feels as if it were screwed in a vice, and that it is sore to the touch. The pulse is small and slow; the tongue slightly furred; the bowels natural. The flow of the catamenia has scarcely ceased.

℞. Magnesiæ ʒss.; Vini Colchici m. xl.; Liquoris Anod. Hoffmani f.ʒj.; Misturæ Camphoræ f.ʒix. M. ut fiat Haustus quamprimum, et urgente capitis dolore, sumendus.—Let the pediluvium be used; and give a dose of Castor-oil in the morning.

1st November.—Two of the draughts were taken before the violence of the pain was abated; but Miss C— had no sleep, and the pain is now (ten o'clock A.M.) considerable. The Castor-oil has twice operated. The pulse is quicker and less languid than it was last night; the tongue is natural.

℞. Pulveris Cinchonæ Cordifoliæ ʒss. pulvis, ex Cyatho Aquæ, secundis horis sumendus.—The powders were ordered to be discontinued when the pain became very acute; and the draughts to be then repeated, as on the previous night.

2d.—The pain returned with great violence last night, although six of the powders had been taken. The pain is now more supportable; the pulse is small, and sixty; the bowels are open, and the urine deposits a copious pink sediment.

℞. Pulveris Ipecacuanhæ ʒss. pulvis emeticus accessione paroxysmo sumendus.—Cont^{r} Pulveres, addendo sing. Pulv. Cinchonæ gr. x.

3d.—Miss C — had a very slight return of pain only after the operation of the emetic, and in the evening imagined that it had entirely disappeared; but it returned at midnight. The motions are pale and scanty. The tongue is cleaner; the pulse small, and sixty.

℞. Pilulæ Hydrarg. gr. xxiv.; Antimonii Tart. gr. jss.; Opii gr. vj. Contunde simul et divide massam in pil. quatuor, sum^{r} j. omni nocte.—Contin^{r} pulveres ut heri.

4th.—Had some sleep during the night, from the pill; but the pain returned at the usual hour this morning, although the paroxysm was much less violent and shorter than before.

Rep^{r} pulv. u. a.—Cont^{r} pilulæ.

5th.—There has been no pain to-day. The evacuations are more natural than usual.

Rep^{r} pilulæ et pulveres u. a.

8th.—Miss C— thought that she felt the pain coming on this morning, but it was scarcely perceptible, and is now (twelve o'clock, noon,) completely gone. She appears in excellent spirits.

Cont^{r} pulv. ter die.—Con^{r} pil. anody. u. a.

13th.—The use of the bark powders has been continued since the 6th, and the pain has not returned. The patient is, indeed, quite well, both in bodily health and in spirits.

Let her discontinue the medicines, and commence the daily use of the shower-bath.

III. *Case of Acute Rheumatism accompanied with Cough.*

1st November, 1822.—Mrs. T—, ætatis twenty-six, of a spare habit of body, fair hair, and bilious temperament, had caught cold by sitting on the damp grass, to sketch a landscape from nature. She coughed often, but generally in paroxysms which recurred in the morning at 9 o'clock, and in the evening. She experienced some temporary relief from opiates, purgatives, and wine of Colchicum; but the cough had hung about her for upwards of two months, until two days since, when she was attacked with the most excruciating pain in the head and face, which left her short intervals only of ease, and returned periodically with greater violence. As the pain was extreme in the jaw, in the root of a carious tooth, this was extracted; but, although she felt some abatement of pain, and slept well for several hours after the operation, yet, on awaking, the pain was present. The throbbing in the site of the carious tooth was gone, but the general pain of the head was unabated. Her bowels had been previously well opened; the pulse was small, and there was not any preternatural heat of skin.

℞. Pulv. Cinchonæ Cordifoliæ ʒj.; Infusi Cinchonæ f. ℥ ij. M. fiat haustus tertia quâque horâ sumendus.

2d.—The pain is less violent, but it is not gone. The patient feels sick and languid this morning: the pulse is soft and feeble; the tongue is clean, and the bowels are regular.

Rep^{r} pulveres u. a.

In the evening, the pain of the head returned, and she complained of sore-throat. On examining the fauces, the tonsils were seen to be slightly inflamed, but not enlarged.

℞. Tinct. Capsici f.ʒss.; Infusi Rosæ f.℥ vj.; Mellis ʒiv.; Acidi Muriatici diluti m. xij. M. fiat gargarysma sæpe utendum.—℞. Submur. Hydrargyri gr. j.; Antimonii Tartar. gr.¼; Opii gr. jss. fiat pilula horâ somni sumenda. —Let the feet be bathed in hot water.

I ought to have noticed that, whenever the head is easy, Mrs. T— is affected with cough, which leaves her as soon as the pain returns to the head.

3d November.—My patient is much freer from pain, but it still makes its attack twice in twenty-four hours. On abating, the pain leaves a sensation in the ear as if an imposthume was forming. The throat is free from inflammation; the pulse is sixty, and small; the urine deposits a copious pink sediment; the bowels are open.

Cont^{r} pulveres et infusum u. a.

4th.—Mrs. T— had a very restless night. The tongue is dry, or rather has a dark brown streak in the middle of it, but the edges and about one-third of its breadth are moist. She complains of constant tenesmus. The pain of the head and the face is much less severe, and there is less throbbing in the ear.

℞. Magnesiæ ʒss.; Magnesiæ Sulphatis ʒiij.; Infusi Sennæ f.ʒxiij.; T. Rhei comp. f. ʒj. M. ut fiat haustus quamprimum sumendus.—℞. Pulv. Cinchonæ ℥j.; Aquæ ferventis f. ℥ xij.; Acidi Sulph. d. f. ʒ ij. M. decoque per horam, in vasé clauso, et cola.—℞. Liquoris Colati f.℥vss.; Tinct. Cinchonæ f. ʒ iv. M. fiat mist. cujus sum^{r} tertiam partem quartis horis.

—The decoction, when strained, had no perceptible acid taste: thence I concluded that the acid combined with the Quinia, and formed a sulphate.

5th.—Nearly as yesterday; but some irritation is excited by spiculæ of the fractured bone of the socket of the tooth which was extracted. Mrs. T— still complains much of the ear.

Cont^{r} mistura ut hieri.

6th.—Mrs. T— had a restless night, and is extremely nervous this morning. I have removed the spiculæ of the fractured jawbone, and ordered a fomentation of Chamomile-flowers and Poppy-heads to be applied over the ear and jaw. The bowels continue regular.

Rep^{r} Mistura c. Cinchona u. a.—℞. Vini Colchici f.ʒj.; Liq. Anod. Hoff. f. ʒ ss.; Mist. Camphoræ f.ʒx.; Syr. Papaveris f.ʒss. M. fiat haustus horâ somni capiendus.

7th.—The pain, although not quite gone, yet is more supportable. The cough has not returned as usual, and is only troublesome on first going to bed.

Rep^{r} medicamenta.

12th.—The use of the mixture has been continued up to the present time. The patient is in every respect better, the pain being scarcely felt, her rest sound, and the cough only troublesome in the morning.

20th.—Mrs. T— is now perfectly free from pain and cough, and considers that she is quite well.

IV. *Case of Acute Rheumatism, in which the influence of the Cinchona in removing the Symptoms was strikingly evident.*

1st November, 1822; the weather moist, and rather sultry for the season of the year; wind west by south-west.—Thomas Phillips, ætatis twenty-nine, a footman, of a spare habit of body, with black hair, and of a melancholic temperament. Being in the habit of perspiring freely at his work, he very imprudently sat down in a current of air to cool himself, a few days since, in the morning; and, in the evening of the same day, became affected with severe pain in his wrists and ankles. This pain, however, did not continue more than two days, and was succeeded by a very acute pain in the loins, and darting pains down the left leg. The pain, both in the loins and the leg, greatly increased at night; but, although it was much easier during the day, it never altogether left him. His skin is hot and dry in the evening, and he sweats so profusely at night that his shirt is quite wet, and he is obliged to rise and change it. The pulse is small and tense, and ninety; the tongue much furred in the middle, but clean and very red at the edges, and feeling as if it were scalded when he takes any thing warm into his mouth. The bowels were regular. Every day since the commencement of the disease, he has experienced a slight rigor about one o'clock in the afternoon, which is succeeded by heat of skin in the evening. He has taken two doses of salts.

℞. Submur. Hydrarg. gr. iv.; Micæ panis q. s. ut fiat pilula quamprimum sumenda.—℞. Magnesiæ ℈ij.; Vini Colchici f. ℥j.; Infusi Sennæ f. ʒviij.; Aquæ Anethi f.ʒvj. -M. fiat haustus horâ post pilulam sumendus.—℞. Subm. Hydrarg. gr. j.; Antimonii Tart. gr. $\frac{1}{4}$; Opii gr. jss. Muc. Acaciæ q. s. fiat pilula h. s. sumenda.—℞. Olei Terebinthinæ f.ʒiij.; Muc. Acaciæ f.ʒv.; Pulv. Cinchonæ Cordifoliæ ℈ij.; Infusi Cinchonæ Cord. f.℥vss.; T. Cinchonæ comp. f.ʒiv.; Syr. Papaveris f.ʒij. M. ut fiat mist. cujus sum^{r} cochl. amp. iij. cras mane et quartis horis.

2d.—The bowels were freely purged by the Calomel and the purgative draught. He slept soundly at night, and awoke free from pain, but is very languid and feverish. His tongue, although clean at the sides, yet is covered in the middle with a dry, harsh, brown streak; it is also redder at the edges than it was yesterday. The pulse is slower, fuller, and softer than yesterday.

Cont^{r} pil. anod. et mistura.

3d.—Continues free from pain. He had a very restless night, but did not perspire. He has had one motion this morning. The urine is less high coloured, and is free from sediment. The tongue is much cleaner, moister, and less red on the edges. The pulse is soft, regular, and only sixty-eight. He forgot to take his pill last night.

Rep^{r} pilula u. a. et mistura sine Pulv. Cinchonæ.

4th.—He had a return of pain this morning, but in other respects remains as before.

Rep^{r} pil. et mist. addendo Pulv. Cinch. u. a.

5th.—Has lost the pain, and is in every respect much improved.

His urine is less high coloured, and deposits no sediment; the bowels are regular; pulse sixty-eight, but rather feeble; the tongue cleaner, but still too red.

Cont^{r} mistura.

6th.—Complains of nothing but debility. He begins to nauseate his medicine, which he says causes an unpleasant sensation of heat at the stomach, that continues for some time after it has been swallowed.

Let him leave off all medicine for twenty-four hours.

7th.—Had a very restless night, and perspired profusely. He remarked that he passed a great quantity of urine last night. To-day, he feels his head muddled and his mind confused. The tongue is more furred; the pulse small, soft, and sixty; the bowels are regular. He is quite free from pain.

℞. Infusi Cinchonæ f. ℥ vss.; Tinct. Cinchonæ comp. f. ʒ iv.; Acidi Muriatici diluti. m. xij. M. sum^{r} cochl. amp. iij. post sequentarum pilularum actionem et quartis horis.—℞. Subm. Hydrarg. gr. iv.; Ext. Colocynth. gr. ix. fiant pil. iij. quamprimum sumendæ.

12th.—Since the 7th, he has continued to improve daily, and is now in a state of convalescence. On account of the debility which remains, he takes two glasses of wine at noon.

I have selected these cases chiefly on account of the combinations in which the Cinchonæ was administered in them. The Oil of Turpentine, in particular, has always appeared to increase the efficacy of the Bark; and in very few instances, which have come under my notice, has it affected either the kidneys or the skin. In some habits, however, idiosyncrasy renders it impossible to continue the use of Turpentine longer than forty-eight hours. The urinary organs are strongly excited, and the urine is passed with great heat and pain, and occasionally tinged with blood; whilst the skin is covered with an eruption resembling Eczema rubrum: but, even in these individuals, the advantages derived from the remedy, in combination with Cinchona, counterbalances the inconveniences which it causes; although, assuredly, it should not be continued to be given when the eruption is fairly formed.

3, *Hinde-street, Manchester-square;*
18th January, 1827.

SCHIRRUS.

Cases showing the Constitutional Predisposition to the Formation of Schirrus in different Parts of the Body at the same time.

By Mr. Jeffreys, Surgeon to St. George's Hospital.

The constitutional predisposition to the formation of schirrous disorganisations in different parts of the body at the same time, is a pathological fact of great importance, as regards the question of operations for the removal of external tumors of this nature. The following cases, while they illustrate the general position, are also calculated to show how little, under such circumstances, is to be gained by the resources of art.

Case I.—Frances Bennett, forty-five years of age, was admitted into St. George's Hospital, April 21st, 1824, on account of a tumor in the right breast.

She stated, that seven years ago she first observed a lump on the outer side of the right breast. It was at that time about the size of a small nut, hard to the feel, and at times very painful: and it was loose and moveable under the skin. About Christmas, 1821, it had acquired the size of a hen's egg; and she then obtained admission into Guy's Hospital, where the tumor was extirpated by Sir A. Cooper. The wound healed very kindly, and she was discharged as cured in about six weeks. After the wound had cicatrised, and before she left the hospital, she perceived another small tumor, which had formed in the same breast near to the nipple. It caused her no uneasiness, and she therefore did not mention the circumstance to any body. At the end of a twelvemonth it began to give her pain, and to grow larger, and had continued gradually to increase in size and pain ever since.

At the time of her admission, the tumor was as large as an egg, and very painful and tender when touched. It was seated in the mammary gland, and felt hard, irregular, and schirrus-like, when examined. It was quite free and moveable over the pectoral muscle, but was attached to the superincumbent skin, which was discoloured; and the nipple was contracted and drawn in. Some of the absorbent glands in the axilla were slightly enlarged, but not at all indurated. Her general health appeared to be very good. The catamenia had ceased about two years.

The circumstances of the case were not of the most favourable nature; but she was desirous of having the part taken away, and, as nothing but the operation was calculated to afford her any chance of relief, the breast was amputated on the 26th of April. The glands in the axilla having subsided to nearly their natural size, were not meddled with. The diseased structure proved to be genuine schirrus. So much of the integuments had necessarily been taken away in the operation, that the cut edges could not be brought into apposition by at least half an inch. Nevertheless, the wound granulated and healed without any interruption, and she was discharged from the hospital on the 9th of June. At that time there was no sign of tumor existing in any other part of her body, and her general health was to all appearance excellent.

On the 22d of June of the following year (1825,) this poor woman was again admitted into the hospital, in the last stage of jaundice. She was much wasted and emaciated, and complained of occasional acute pain in the epigastric and hypogastric regions; and a perceptible enlargement and induration of the liver could be felt. Nothing checked the progress of the disease, and she sunk and died on the 19th of July.

Dissection.—The cicatrix left by the operation was quite healthy, and had acquired no adhesion to the subjacent parts. Several small, white, hard tubercles were found under the integuments covering the thorax, and a few in the pleura costalis. The lungs had no appearance of disease. There was a small quantity of serum effused into the cavity of the abdomen. The liver was enlarged, indurated, of a dark colour, and full of large white tubercles. Some of the mesenteric glands were enlarged and hardened; and a few tubercles were observed under the peritoneal covering of the intestines, and some on the bladder.

CASE II.—Elizabeth Brown, a thin, spare woman, seventy years of age, was admitted May 24th, 1826. She had a schirrous tubercle, not much larger than a nutmeg, in the gland of the left breast. The skin over it was slightly discoloured, and adhering to the tumor; but there was no attachment to the parts beneath, the gland being free and moveable over the muscle. In the axilla was an indurated mass, as hard as a stone, filling up the space from the edge of the pectoralis major muscle to the clavicle. The arm was swollen and œdematous; and she complained of pain in the breast, axilla, shoulder, and arm.

She said, that she had not been at all aware of having any complaint in the breast until seven or eight months ago. About that time she met with a fall, and hurt her left shoulder. Soon afterwards, while rubbing the arm and shoulder, she discovered that she had a swelling in the axilla, and a lump in the breast.

Besides the disease in the breast, she complained of severe pain in the abdomen, which was rather more prominent than usual, and tender when pressed on, but neither tense nor hard. She complained also of great pain and uneasiness across the sacrum, and of irritation in making water. She was feeble and emaciated; had a furred tongue and costive bowels; and her pulse beat 100 in a minute. She was very low and dejected, and would hardly take any nourishment. The pain in the belly was increased by lying down, and she therefore generally sat up in bed, with her knees drawn up, and her chin on her breast.

The bowels were kept open by castor-oil; she was cupped on the sacrum, and had leeches to the abdomen; and she took opium and extract of hemlock to relieve the pain. Very little relief, however, was obtained; and she died on the 7th of June.

Dissection.—The tubercle in the breast, and the mass in the axilla, when cut into, presented the genuine character of true schirrus; the upper part of the latter was firmly attached to, and surrounded the axillary vessels. In the substance of the lungs of the right side were found two boney depositions, each about the size of a pea.

In that portion of the mesentery and mesocolon belonging to the termination of the ileum, the caput coli, and the beginning of the arch of the colon, was a large tumor, consisting of diseased glands, which exhibited the same kind of morbid structure as the tubercle in the breast. These parts were all matted and glued together into a confused mass, from the effects of former inflammation. One or two smaller specimens of the disease were found in other parts of the mesentery. Between the rectum and the sacrum was another tumor, as large as half an orange, having the same characters. It adhered firmly to the bone, and embraced the posterior half of the gut, so as considerably to diminish the size of its canal. In the edge of the left lobe of the liver was another tubercle, as large as an olive. There was no appearance of recent inflammation in the peritoneum or intestines.

Case III.—Amelia Hubbard, aged forty-four years, thin and delicate in her appearance, was admitted, October 11th, 1826, with a schirrous tumor in the right breast, as large as a duck's egg. It was situated in the mammary gland, and was hard and incompressible, and gave her a good deal of pain, particularly after being examined. The skin over it, as well as the nipple, which was shrunk and drawn in, adhered to the tumor. The integuments at that part were discoloured; and a little below the nipple were two superficial ulcerations, each about the size of a sixpence. The tumor had no attachment to the parts beneath it. Two or three absorbent glands in the axilla were enlarged and indurated; and there was another in the same condition above the clavicle. She complained of a good deal of pain darting through the breast, and had occasionally pain and numbness in the arm of the same side.

She said she had been sensible of having a lump in that breast for about two years, and that it had lately got larger and more painful. The catamenia had ceased four years.

On the seventh day after her admission, she was seized with violent rigors, that were followed by severe erysipelas in the diseased breast, side, and back; of which she died on the third day from the attack.

Dissection.—The tumor in the breast had the usual characters of scirrhous structure, and in the centre of the mass an imperfect suppuration had commenced. The glands in the axilla, and that above the clavicle, were converted into white hard tubercles. Within the thorax, immediately under the diseased breast, was a schirrous tumor, as large as half an orange, situated between the ribs and the pleura costalis, to both of which it was attached. The intercostal muscles, as well as the other parts intervening between this tumor and the breast, were free from any appearance of disease.

DROPSY.

Case of Dropsy, in which large Doses of Kino appeared to be of essential Service. Communicated by Dr. PAUL, of Elgin, in a Letter to Sir JAMES M'GRIGOR.

WHEN I did myself the honour of writing to you in February relative to your friend Colonel G——, of the Royal African Corps, I mentioned that, as the remedies usually employed in the disease under which he laboured had entirely failed, we had adopted a plan of treatment founded on a principle very different from that on which the cure is generally conducted; the result of which I promised to lay before you. I would have done so long ere this time, if you had not had an opportunity of seeing the Colonel in London, and of knowing every thing from himself, as I thought, which was worthy of being communicated. Colonel G—, however, assures me that he could only give you a very imperfect idea of his case; and, as you felt an interest in knowing what had been of use to him, and expressed some astonishment on hearing his own account of it, he is particularly anxious that I should give you a more circumstantial one.

The Colonel, as you know, returned to Elgin in October 1825, from the coast of Africa, where his health had suffered much from repeated attacks of fever. At that time emaciation had made alarming progress. He had constant irritative fever; pulse varying from 110 to 120; features very sharp, I may almost say hippocratic; great prostration of strength; abdomen tumid, evidently containing fluid; considerable tenderness on pressure over the hepatic region; anasarca of the feet and ankles; perspirations in the morning; great irregularity of the bowels; for the most part they were too open, but the discharges were not always fluid; he made about the usual quantity of urine, it was of a dark brown colour.

When I first saw him, he was slightly under the influence of mercury. The mercurial action was kept up in the same gentle manner, by rubbing in small quantities of the ointment, with the view of restoring healthy action in the liver, and also of promoting the absorption of the effused fluid. Strict attention was paid to the bowels, both to carry off vitiated secretions and to quiet irritability. Powerful frictions over the abdomen and along the spine, with the hand and flesh-brush, using a stimulating liniment. An attempt was made at the same time to act, if possible, powerfully on the kidneys by diuretics, and the most powerful of this class of medicines were exhibited,—viz. Tinct. Digitalis, Squills, Spiritus Ætheris Nitrici, Acet. Potassæ, &c. variously combined. Broom-tops were thought of, but there appeared to be too great relaxation of the system, and of the intestines in particular, for their exhibition.

We persevered in the manner now specified till the 26th of December, when he had become worse in every respect: the fluid in the belly had accumulated so much, that it was quite impossible to think of affording relief but by tapping. Your friend Dr. SKENE, who saw him at this time, concurred in the propriety of having the fluid drawn off, giving at the same time a very unfavourable prognosis. On the 26th December he was tapped, and eighteen pints of fluid drawn off. The diuretics were again administered with the most scrupulous attention. The mercury was discontinued on account of increasing debility. The pain in the side on pressure was still complained of. The diuretics disturbed the stomach exceedingly, and had no effect on the urinary secretion. The water accumulated again very rapidly in the belly, and his ankles were much swelled. He appeared now to be in the most imminent peril; indeed, so great was the prostration of strength, that we were afraid that tapping might bring on fatal syncope. It was, however, done on the 24th January; taking the precaution of stopping the discharge seven or eight times, and giving wine: sixteen pints were discharged. During the time it was flowing, he complained a good deal of uneasiness about the right side of the thorax. For several hours after the operation, he appeared to be so exhausted that he could not be removed from the sofa. For two or three days we were afraid that he was sinking. His strength again began to rally; the fluid in the belly accumulated as rapidly as ever.

The diuretics having been fully tried, and without producing the least effect, it was thought useless to continue them longer, particularly as they disturbed the stomach. It occurred to me that some advantage might be derived from acting on the following principle: to prevent, if possible, the further accumulation of the fluid, and to trust solely to the natural actions of the body for the absorption of what was effused. On the 3d of February, the Tincture of Kino was prescribed, and port wine substituted for sherry. For the first few days, he took four drachms of the tincture daily in divided doses, in port wine; and then he took daily one ounce, and fully half a bottle of port, till the 1st of April; and since that time he has taken one ounce only in the three days.

When he began to take the kino, he was nearly as full as before tapping: after taking it for eight or ten days, symptoms of amendment began to manifest themselves. His appetite improved; he became stronger; pulse was less frequent. The abdominal swelling was found, by exact measurement, to be stationary; and very soon it evidently decreased, so that, at the time the dose of the tincture of kino was reduced, he was able to go some distance from home.

When I first saw him after his arrival from London, I was forcibly struck with the improvement which had taken place since his departure; and, although there may be still some fluid in the abdomen, it is not, I think, unreasonable to expect that it will be altogether removed, when we reflect on what has taken place.—

He has taken, since he has been under my care, every eight or ten days, at night, three grains of Calomel, and next morning half an ounce of Tinctura Rhei, to carry off vitiated and to promote healthy secretions.

Forgetful, as we often are, of the powers of nature in effecting salutary changes of disease, and wishful to impute them to the agency of remedies, yet in this case it is fair to admit, I think, that the kino was of essential service. In corroboration of this opinion, I may mention that, whilst he was in London, he discontinued the kino for a time, and his belly became so tumid that he could not button his coat; but, after using the kino for some time, it again decreased. The theory of its operation in dropsical effusions, as far as I can judge, is that, when taken into the circulating system, it acts as a tonic, promoting the contractility of the blood-vessels, without stimulating them materially to increased action, thereby preventing superabundant exhalation; by which means the absorbents remove more than what is effused. In Colonel G—'s case, by its tonic operation on the intestinal canal, the alvine discharges were diminished in frequency, but nothing like constipation was produced.

From the effect which the tincture of kino has had in controlling the dropsical effusions in this case, I am induced to think that it will be found, on further trial, to be a valuable medicine in some of the varieties of dropsy. When it depends on any inflammatory condition of serous membranes, or when there is much visceral disease, it is not likely that kino would be of use; yet, in Colonel G—'s case, there was considerable affection of the liver. I am not aware that kino has ever been given in such large doses, and with the same views, as in the present case.

Elgin; November 17th, 1826.

ACEPHALOUS FŒTUS.

Description of an Acephalous Fœtus. By ROBERT ABRAHAM, Surgeon, Carlisle.

ON the 2d of December, 1826, Mrs. B—, of this place, was delivered of a fœtus of the presumed age of seven months. When it was born, it showed not the smallest signs of life, excepting an obscure pulsation in the umbilical cord, which ceased immediately on its birth.

As I believed, from its external appearance, that an accurate examination of it would prove extremely interesting, I obtained permission to open it; which I did with the assistance of Dr. BARNES of this place, whose intimate knowledge of the cerebral structures, and skill in developing them, I have had frequent opportunities of observing.

The limbs and body were those of a fully grown fœtus of the age of seven or eight months, but the upper part of the head was entirely deficient; the whole of the parietal bones, and nearly all the squamous portion of the temporal, being wanting; and also all that part of the front of the cranium superior to the eyes, and all the occipital bone, excepting the basilar and condyloid processes; the spinous and transverse processes of the four superior cervical vertebræ were also wanting, so that the spinal canal was laid completely open.

The eyes were covered with palpebræ, and, from the deficiency of the frontal bone, formed the superior boundary of the face: they stood wide open, and, from their size and position, gave the countenance a very hideous aspect. There was a little hair on the temple.

The back part of the head was covered by a delicate membrane, extending over the deficiency in the spine. It was of a dark mulberry colour, and was gorged with blood, as were likewise the eyes; so that the labour had probably propelled more blood into those parts than was natural to them. On dividing this membrane, it was found to cover a large venous plexus with considerable sinuses, so that in a short time all the fluids in the body were evacuated through them. Beneath them lay a dura mater, and the basilar spheno-occipital process very completely ossified; but the most rigid examination could not detect even the rudiments of a brain. The optic nerves terminated without uniting immediately after leaving the sclerotica; the sphenal foramina were imperforate, the body of the bone bearing a pretty accurate resemblance to the ordinary shape of the posterior part of the atlas; the petrous portion of the temporal bone was incomplete, though the external ear was perfect; the nerves of the neck were seen losing themselves beneath the base of the skull; the spinal cord terminated at the cervical vertebræ. *Nothing like a cerebrum, cerebellum, or medulla oblongata, was discernible.*

The parents are well formed; this was the fourth pregnancy. Two of the children are dead: the survivor, a boy, is a beautiful child, with a finely developed cranium. The labour, in its first stage, was tedious and difficult; remarkable, in an extreme degree, for irregular dilatation and rigidity of the os uteri. It exceeded any I ever before witnessed in tension of the membranes and copiousness of liquor amnii. The umbilical cord was very short, and the placenta small.

I am not fond of mixing facts and controversy; yet I trust my readers will excuse my observing, that this case furnishes no confirmation of the theory lately advanced by M. GEOFFROY ST. HILAIRE. There was not the slightest vestige of a twin; and, from circumstances unnecessary to detail, I am satisfied I could not be mistaken on that point.

Carlisle; December 15th, 1826.

INDURATION OF THE CELLULAR MEMBRANE.

Case of Induration of the Cellular Membrane in a Child. Treated by Dr. Mac Andrew, at the South London Dispensary.

George Horwich, eighteen months old, admitted a patient at the South London Dispensary, October 16th, 1826.

His mother states that, about two months ago, he was observed to be feverish and restless, and soon afterwards became affected with a looseness of the bowels, and a swelling of the lower extremities; which complaints have never left him since. He has taken powders, with the nature of which she is unacquainted, and has been cupped behind the ears. When examined to-day, the feet, legs, and thighs are found to be much enlarged, in consequence of a diffused swelling that renders the skin very tense. The swelling has a wax-like appearance, and is nearly colourless, excepting for about two inches in the middle of the left leg, where it has a livid colour. Some degree of livor is also observable on the thighs. The swelling does not pit, although firmly pressed by the fingers; nor does the pressure appear to occasion any pain, except on the discoloured part of the left leg. All the affected parts feel cold to the touch. The penis is much distended, but not livid. The abdomen is neither swollen nor hard; the rest of the body is emaciated. He has nearly twelve stools daily: they are of a yellow colour, sometimes greenish; they are very liquid, and occasionally squirted out to a considerable distance. He appears to be pained before having an evacuation. He makes water freely. He takes the breast readily enough, but refuses other nourishment.

Pulv. Cretæ comp. gr. v. ter die.—Liquor. Ammon. Acetat f.ʒiij.; Spirit. Rectificat. f.℥j.; Aquæ f.℥viij. M. fiat lotio continuo admovenda.

18th.—The swelling of the thighs is very much diminished, and that of the legs, feet, and penis, is also considerably lessened. That part of the left leg which was before of a livid colour, has now acquired a dark red colour, as if fresh blood had been effused from a bruise. The feet and legs are still cold, and the lotion has been applied tepid. Bowels not so frequently opened, and stools less watery. He is very thirsty, and has taken beef-tea freely. Tongue clean. He looks very pale and weak.

Continue.

19th.—Little change in the swelling. Diarrhœa continues: the stools are not quite so liquid; they are of a yellow colour, and in one of them a little blood has been observed. Does not take so much beef-tea.

Contin^{r} pulveres.—Mucilag. Amyli. f.℥ss.; Tinct. Opii m. vj. pro enemate.

20th.—Enema returned immediately: he has only had one stool since. Passed the night quietly enough, but towards morning he became apparently insensible, and was observed to make a noise in breathing. Face pale; breathing laborious, and attended with a mucous rattle. Pulse at the wrist still perceptible.

To take from time to time a little gruel mixed with brandy.

Died at ten next morning.

The body was examined twenty-eight hours after death.

Chest: Some frothy mucous fluid in the trachea and bronchi, although the inner membrane shows no redness or other sign of inflammation. The lungs are healthy throughout; the posterior part of the inferior lobes being of a darker colour than the rest, merely on account of the position of the body. The heart is of the natural size, and contains polypi in the right auricle and ventricle.

Abdomen: Intestines distended with flatus. Stomach contracted, and contains a little gruel; its mucous membrane is corrugated, and quite pale, excepting a minute point of a red colour in the great sac. Duodenum healthy, containing bile of a rich yellow colour. The jejunum is of a red colour externally, for an inch or two in different parts: these portions of intestine are contracted, and their inner membrane is red, but not ulcerated. The same appearance is observed in several parts of the ileum. About half way between the duodenum and cœcum, the upper part of the intestine had slipped into the lower for an inch and a half: the intussuscepted part, although much contracted, was neither red nor inflamed. The caput cœcum coli was filled with healthy-looking fæces, but its inner membrane was much reddened. The colon on the left side was much contracted, and at the sigmoid flexure the redness of the mucous membrane was very marked.

Extremities: The cellular membrane of the left leg is much thickened. It is more than a quarter of an inch in depth; it is of a light red colour; is very dense, and does not yield on pressure; it has a distinct granular appearance, and is not unlike a portion of hepatised lung. Immediately below this indurated membrane, there is a layer of gelatinous looking substance, of about two lines in thickness, which, when cut into, allows a thin fluid to escape. This change of structure is observed over the whole left leg, and also prevails to a certain extent in the thigh and leg of the right side. A puncture made in the foot allowed a few drops of fluid to escape, on firm pressure being applied. The muscles of the leg were perfectly healthy.

Head not examined.

There is nothing very remarkable in the diarrhœa which carried off this child: it was evidently caused by inflammation in different parts of the intestinal tube; and although, in all probability, this was of two months' duration, it had not excited ulceration. The affection of the extremities, however, is an uncommon disease, and the cases of it described in this country are but few. Excepting the effects of severe external injury, the most common causes of a general swelling of the limbs are erysipelas and anasarca. These two affections are very different in their nature; they scarcely agree in any point but the mere swelling: in the one case, accompanied with burning heat, vivid redness, and acute fever; in the other, characterised by a want of colour and of pain, a scanty flow of urine, and a pitting upon pressure that is very remarkable.

There are three diseases that appear to occupy a place between these two extremes, and in which their symptoms are more or less blended together,—the phlegmasia dolens, which is peculiar to women in child-bed; the Barbadoes leg, or elephantiasis of some authors, which is almost confined to warm climates; and a general induration of the subcutaneous cellular web, that has chiefly been observed in infants,—the "skin-bound" of Dr. UNDERWOOD, the "endurcissement du tissu cellulaire" of the French pathologists.

I believe the case of Horwich to be an example of this last affection; at least it approaches nearer to it than to any other disease that I have ever heard of. With regard to the livid colour which was observed in part of the leg in this case, it is by no means a constant symptom of the disease. Dr. DENMAN never mentions it, but says that the colour of the skin is always yellowish-white; and Dr. UNDERWOOD agrees with this description.* In the cases observed at Paris, however, ANDRY and AUVITY frequently met with a bluish colour of the affected parts. M. DARD likewise remarked it in the case that he has related.† In the present instance, it had very much the look of a part that had been much bruised.

The coldness of the affected parts is, perhaps, the most singular feature in the complaint. It was so evident and so unexpected in the first case ever related, that the midwife declared that the child felt like a lump of ice, in coming into the world. It is noticed by all who write on the subject; and the patients are frequently described as receiving the impression of external heat like any inanimate body. They are warmed at the fire like a piece of wood, and become cold again in spite of the use of warm flannels. It does not, however, appear that the sensibility of the part is destroyed. Patrizia Galiera retained the power of feeling, although the skin had lost its natural warmth.‡ In the case of Horwich, there was pain at a particular part of the swelling, but this does not appear to have been a common occurrence.

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* UNDERWOOD's Diseases of Children.

† Dictionnaire des Sciences Medicales.

‡ Case extracted from the Italian of CARLO CRUSIO, and related in the Philosophical Transactions, vol. xlviii.

The hardness of the intumescence, and the firmness with which it resists pressure, show the difference between this complaint and anasarca. In the case related by UZEMBEZIUS, no impression was made on the cheeks by the finger; the parts affected resembled flesh hardened in the smoke. In the Neapolitan girl, the flesh felt hard to the touch, like wood or a dry hide. Dr. Denman found the skin and flesh hard and resisting, and the cellular membrane fixed in such a manner that it would not slide over the muscles. Similar remarks are made by other authors.

The parts to which the disease extends vary considerably: in some the lower limbs only are affected, as in Horwich; in others, the lower part of the abdomen, the scrotum, the upper extremities; the neck and the face are also involved: hence difficulty of opening the mouth, and inability to bend the neck, to turn the head, or to use the limbs.

The subjects of this disease are generally children not more than ten days old. M. Dard's patient was a year old; Horwich one year and a half; whilst Crusio's patient is the only adult who has evidently laboured under the disease, and whose case has been related.

Mr. WHITE, when speaking of phlegmasia dolens, says that he has seen another disorder of the same kind, without pain or fever, and of several years' standing. HEWSON also saw two such cases; and it is not improbable, from the brief descriptions given, that they may have been instances of this complaint.*

The appearances on dissection are not uniform. Underwood never discovered any extravasation in the cellular membrane after death. Andry and Auvity always found an incision followed by an abundant flow of serosity, of a deep yellow colour, and of an albuminous nature, coagulating by heat. The cellular membrane was granulated, compact, and dry. In M. Dard's case, the diseased part offered much resistance to the knife; no serosity exuded from it, and the cellular membrane looked like that of a recently killed hog. When Galiera was bled, the resistance offered to the incision was so great that the lancet yielded and was bent. BRESCHET generally found the foramen ovale open in the subjects of the disease; but I am not aware that this coincidence has been remarked by other authors.

The cause of this affection is far from being well ascertained. At Paris, it generally attacked children who had been exposed to the action of cold from improper clothing. Underwood attributed it to the unhealthy air of crowded hospitals, or of the habitations of the poor; and is disposed to look upon it as epidemic at certain seasons. He almost always found it connected with diarrhœa advanced to the last stages; and in this case the same connexion was observed. The French cases have often been complicated with spasmodic affections, approaching in their nature to tetanus: frequently, however, there was no complication, and the patients recovered. In the majority of cases the complaint has proved fatal, perhaps more on account of the other diseases under which the patients laboured at the same time, than from the effects of the disorder itself. The danger diminishes as the age advances.

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* Inquiry into the Nature, &c. of a Swelling in Lying-in Women.

The treatment recommended by Underwood consisted in a strict attention to the state of the bowels, and the administration of ammonia as a stimulus; warm bathing and warm clothing being the only topical means employed. Andry used a decoction of sage, or other aromatic herbs, as a local application; and he was frequently successful. Dard combined these with the use of purgatives. The Neapolitan girl used baths of milk and water, decoction of woods, vapour bath, and pure mercury; and she recovered.

The most remarkable circumstance in the case of Horwich is the rapid diminution of the swelling which took place in two days, although it had been two months in forming. I know not to what this activity of absorption can be attributed, unless to the effects of the lotion employed; but I certainly did not expect that it would have proved so efficacious. Of course, it was only the thinner fluids that were absorbed; for we cannot suppose that the compact tissue, observed after death, was at all affected in so short a time.

Upon the whole, the most rational plan of treatment would appear to be, to direct the chief attention to the more serious disease with which this affection is generally complicated; and, when this has been removed, to have recourse to the usual means of promoting the absorption of effused fluids, or the resolution of chronic indurations,—namely, friction, pressure, and the internal exhibition of mercury.

161, *Great Surrey-street;*
December, 1826.

INJURY FROM DISSECTION.

Case of Injury received in Dissection. By John Shaw, Surgeon to the Middlesex Hospital.

The following history relates to a subject so interesting to all members of the medical profession, that it is unnecessary to make any apology for laying it before your readers. The first part is nearly in the words of the patient, a practitioner in town.

"When I awoke, (on Sunday morning, 7th January,) the fingers of my left hand felt stiff, attended with an acute and hot smarting pain, as if they had been burnt: the pain extended over the back of the hand, and up the arm to the axilla, and was particularly severe above the inside of the elbow, where the gland was already swollen and painful to the touch. I had headache; dull, heavy coldness of the feet and the other hand. On getting up, I felt stiff and sore in all my limbs; the muscles at the back of my neck were peculiarly so, and an uneasiness extended along the left side to the foot and ankle. On going to wash, I perceived a small pustule on the last joint of the middle finger of the left hand. It was very painful, and the finger appeared inflamed and swollen. I now recollected that I had, about half-past one the day before, grazed it with the eye-end of the needle, while sewing up the body of a person who died of peritonitis.

"Feeling myself exceedingly nervous and depressed, at half-past nine, I took two table-spoonfuls of brandy in a cup of coffee. Immediately after this, I went to see a patient; but the pain continued to extend over the left pectoral muscle, and deep under the axilla; the general uneasiness and coldness also increased, and I became more languid and dejected. While walking through Portman-square, I was seized with a fit of laughter, over which I had no control; and, when in the patient's house, I could scarcely restrain myself from crying. I got home a little after ten; and now I felt an oppression in my breathing, with a constriction in my throat, which produced difficulty of swallowing; the skin of the face felt tightened as if starched, and the jaws were stiff. The deadly coldness increasing, at a quarter to eleven I took three-spoonfuls of brandy.

"Dr. Ferguson, who had been present at the examination of the body, now called: he did not object to the use of the brandy, but, as he was just setting off to the country, desired me to send for Mr. Shaw. In the mean time, the general coldness and depression increasing, I took more brandy, and so freely (as I have since learned) that I had taken three-quarters of a pint before a quarter-past twelve. A medical friend then visited me, and advised me not to take any more brandy. He prescribed four grains of calomel, and seven leeches to the wrist, which was now much inflamed." Such was Mr. ——'s account.

Having been engaged, in another part of town, in examining the body of a patient who had died of peritonitis, (which, when I saw this gentleman, gave me some occasion of alarm,) I did not reach South-street until a quarter past one. I found the patient reclining on two chairs, with his arm lying on a table: the wrist and hand were of a livid red; a similar patch was on the inside of the arm, above the elbow; the finger was a little swollen, but the wound was scarcely perceptible. His countenance was very extraordinary, his expression being that of a mixture of hysterical alarm and intoxication. From his general appearance I thought he was delirious, but, when my name was mentioned, he said "I am glad to see you, Mr. Shaw," (I had never seen him before;) "but I am a dead man; I feel that nothing can save me. They have put leeches to my hand, but all is useless: I was poisoned in opening a body." He then burst into an hysterical laugh. When told of the quantity of brandy he had taken, I supposed that the peculiarity of his appearance was produced by it; but I have since learned from Dr. Ferguson, who saw him when he had taken only two table-spoonfuls, that he was then nearly in the same state.'

With much difficulty I got him up stairs to bed: on lying down, he said, "I shall never rise from this bed." I immediately gave him a bolus of eight grains of calomel and six of colocynth, with two grains of opium, and wrapped his arm, from the fingers to the shoulder, in a towel steeped in a lotion made of four ounces of tincture of opium, two drachms of the liquor acetatis plumbi, and sixteen ounces of water. I remained with him a short time, and, finding him more composed, I ordered that laudanum should be freely poured over the cloth, so as to keep it quite wet; and that an infusion of an ounce of powdered opium in a pint of boiling water should be immediately prepared. I returned in about an hour: learning that he was more composed, I did not go up to him, but desired that a linseed poultice should be made with the infusion of opium, and applied to his hand and wrist; and the lotion of laudanum and lead to be constantly applied until I visited him again.

In the evening, I requested my friend Mr. Griffiths, of Bentinck-street, (who, while house-surgeon of St. George's Hospital, had an attack somewhat similar,) to accompany me. We found our patient quite composed, but dejected and low. His hand and arm were not so much inflamed as in the middle of the day. We ordered ten grains of the Dover's powders, with four of calomel, to be taken immediately; and after it a draught of an ounce of camphor mixture, eight grains of carbonate of ammonia, fifteen drops of laudanum, and half an ounce of mucilage. This was to be repeated every four hours, if awake. The lotion and poultice to be continued. He was to take a little gruel.

On calling about ten in the morning, we were not a little surprised to find that he had gone to the neighbourhood of

Burton Crescent, to attend a patient in labour. We were told that he had only retained about two and a half of the draughts, having vomited up the rest. I returned at three, expecting to find him again in bed, but I found him in his parlour, and he appeared to be so well that I recommended him only to continue the lotion and poultice, and to take some strong beef-tea.

At seven in the evening, Dr. Ferguson, Mr. Griffiths, and I met. Mr. ——— was now quite composed, could give a connected report of his state of feeling previously to my seeing him. He had not even head-ache; which he observed was extraordinary, as when, on any former occasion, he had taken even a glass of spirits, he had suffered even excessively from it. The hand and wrist, instead of being tense and livid, were white and corrugated, and without pain; but there was still a blush of redness above the elbow. His bowels had been freely opened. We now prescribed ten grains of the Dover's powder and four of calomel, with five grains of the Pilula Sapon. c. Opio; and desired him to take a glass of brandy in his gruel, and to continue the lotion and poultice.

On calling next morning, I again found that he was out. I saw him at three, continuing better: he had not taken the calomel, as his mouth felt sore. On Thursday he called, and saw me at the hospital: the inflammation of the arm had nearly subsided, but I advised him to keep his arm in a sling for a few days.

I did not see him again until to-day (the 24th): he has been quite well for some days; no abscess formed.

Notwithstanding Mr. ———'s rapid recovery, I think, when the symptoms he laboured under are compared with those fatal cases detailed by Dr. DUNCAN and others, and especially with the account given by Dr. A. T. THOMSON of his own sufferings, there can be little doubt that this was one of the serious cases which ensue from wounds received during dissection. The symptoms could not in this instance be ascribed to thecal inflammation, for there never was more than a pustule. I fear that at present too much importance is attached to the effect of the local irritation. I am well aware of the alarming symptoms that sometimes ensue from the confinement of matter, but the prevailing theories on this question are, in my opinion, replete with danger.

From the history of this case, I think we are justified in concluding—That the symptoms resembled those following the bite of a venomous animal, more than those consequent on thecal inflammation, and that they proceeded from a cause independent of mere local inflammation;—that, immediately on the commencement of such symptoms, stimuli are not injurious;—that it is not necessary to bleed in such cases;*—that the combination of calomel, opium, and stimuli, even of the most powerful kind, seems to be useful;—that the lotion of acetate of lead and opium is a powerful auxiliary to the general method of treatment.†

The plan of treatment which I have proposed differs very much from that generally advised. I was led to recommend stimuli from remembering the relief I myself experienced when suffering from a wound received in the dissecting-room. Dr. Thomson seems to have proceeded on the same grounds; and we have, in the preceding history, an extraordinary example of the extent to which the stimulating plan may be carried. I would not recommend a similar course to be pursued in another case; but it seems to prove that, in the first state, the disease is not inflammatory.

Perhaps your readers will allow me to make the following quotation from a former communication to your Journal in May 1825. After describing the nature and treatment of wounds received in the dissecting-room, I have stated that—

"The other class of cases is more serious, as it constitutes an affection to which the practitioner is more liable than the student, and one that is attended with immediate danger to life.

"All who have been in the habit of attending to morbid anatomy, must admit that there is more danger from a wound received during the examination of the body of a person who has died from any form of inflammation of the peritoneum, than of any other disease. So convinced am I of this, that I have for many years inculcated the necessity of being particularly careful when examining a body, even though it is not putrid, where death has been caused by puerperal fever, the operation for hernia, or any form of peritonitis, or, I may add, even of pleuritis.

"If, five or six hours after examining such a body, pain is felt in the finger, and a small pimple or a blush of red is found at the part, immediate attention should be paid to it. If the case proceeds in the usual manner, there is a darting pain up the arm, which seems to fix more particularly in the shoulder or side of the chest. Within fourteen hours, the patient is very ill; he suffers a great deal of pain, and is anxious and alarmed. Red lines may generally be perceived running from the hand towards the axilla, but somtimes there are no marks on the arm, nor even on the finger. Indeed, the affection of the finger is occasionally so slight, that it is neglected, and the patient refers all his sufferings to the shoulder and chest.

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* It must not be forgotten that, in almost all the cases which have terminated fatally, the patients have been bled either by the lancet or leeches. Mr. —— did not lose two ounces of blood: I took off the leeches immediately on seeing him.

† This lotion is almost a specific in subduing the inflammation consequent on the wounds received in the dissecting-room: I have generally been able to prevent the formation of abscess. If Mr. ——'s case be compared with Dr. Thomson's, I think it will be admitted that the lotion prevented the formation of abscess.

"With regard to the treatment, the most important question seems to be, what is to be done during the first twenty-four or forty-eight hours? for, after this time, the peculiar character of the disease is in a great measure lost. The patient may fall into a low typhoid state, or he may labour under the symptoms of the erysipelas phlegmonoides; so that after a few days there may be a question as to whether he is to be stimulated and supported, or to be reduced by bleeding.

"Are we to bleed in the first instance? Is a man to be bled because he has a pulse at 140, headache, anxiety, and difficulty of breathing, and flushing of the face? Under almost any other circumstances, excepting in those I have mentioned, I believe no one would for a moment doubt the propriety of a copious bleeding, when such symptoms are present: but may not the pulse be raised by a morbid irritation,—the anxiety and flushing of the face proceed from terror,—the headache from the same cause,—and the difficulty of respiration be owing partly to the same, and to the morbid condition of the principal respiratory muscles? But we seldom have the face flushed; it is generally pale and haggard, with a cold perspiration on the brow; and the tongue has not the white dry surface, nor has the pulse the hard stridulous beat, that marks the inordinate action which requires to be subdued by blood-letting. Proceeding on these grounds, and on the conclusions I have drawn from the accounts given of the effects of bleeding in the cases that are recorded, I have objected to venesection. I have also objected to local bleeding by leeches; for the swelling and inflammation of the arm is of a character that does not appear to be benefited by such treatment; and although, from the cases recorded, we may conclude that local bleeding has been sometimes of advantage, still its good effects have not been sufficiently marked to induce me to run the risk of reducing in this way the vital energies of my patient."

As no bad effects resulted from the free use of brandy in the case I have detailed, and as depletion by bleeding has been tried in all the cases which have terminated fatally, I think I am justified in still giving the same opinion as to the way I should treat myself, were I to be affected in a similar manner.

"The moment the pain commenced, I would immerse my finger in equal parts of laudanum and Goulard's lotion; I would take a smart dose of calomel and antimony, and, two hours afterwards, a large dose of laudanum. If the pain still continued, I would bathe my whole hand and fore-arm with tepid laudanum and Goulard,—take another opiate, perhaps with a little ammonia,—and even force myself to swallow cordials in the form of warm negus, &c."

ANEURISM.

Cases of Aneurism from Bleeding, which were treated at St. George's Hospital, *under the care of* B. C. Brodie, Esq. &c. &c.

Case I.—J— R——, ætatis forty-two, on the evening of the 30th of August, 1826, was bled in the arm. Unfortunately, the lancet penetrated the coats of the brachial artery. A copious hemorrhage followed, which was with some difficulty restrained by the application of compresses and a bandage. On the 1st of September, he was admitted into St. George's Hospital. At this time the arm was very much swollen, in consequence of the extravasation of blood into the cellular texture, and there was an undefined pulsating tumor on the fore part of the elbow-joint.

Soon after the man's admission into the hospital, and thirty-six hours after the occurrence of the accident, Mr. Brodie performed the following operation:

In consequence of the extensive extravasation of blood which had taken place among the muscles of the arm, he did not attempt to secure the artery at a distance from the puncture. An incision was made on the inner edge of the biceps flexor cubiti, so as to expose the artery at the part at which the lancet had entered. A ligature was then applied round the vessel, immediately above the puncture. On the tourniquet being loosened, it was found that this ligature was not sufficient to restrain the hemorrhage. A second ligature was therefore applied below the puncture.

This operation was not unattended with difficulty, owing to the large quantity of coagulated blood which lay over and around the wounded vessel. The wound was dressed to the bottom with lint, as there seemed to be no probability of union taking place by the first intention. Inflammation of the arm, with some degree of febrile excitement of the system, followed the operation.

On the 5th of September, the lint was removed from the wound. A considerable quantity of matter escaped, which gave the patient immediate relief.

On the 6th of September, there was but little pain; the tension of the limb had in a great degree subsided. The pulse could not be perceived at the wrist.

Sept. 11th.—One ligature was separated; and the other came away two days afterwards.

From this time a progressive amendment took place, until the 26th of September, when there was a slight erysipelatous inflammation of the arm, which however subsided in the course of two or three days. On the 30th of September, the patient left the hospital, the wound being nearly healed.

In this case it was observed that the brachial artery was wounded immediately above its division into the arteries of the fore-arm, and the puncture was of a considerable size. This last circumstance accounts for the unusual degree of extravasation which followed the accident. The operator would have cut down on the artery in the arm, if he had not found that this operation was likely to have been attended with more difficulty than that of exposing the vessel on the fore part of the elbow-joint. It is probable, however, that, even if the operation had been done in the first of these ways, it would have been found to be necessary to secure the artery below the puncture also, as the ligature applied close to and immediately above the puncture was insufficient to restrain the hemorrhage.

The following case, which occurred in St. George's Hospital a few years ago, is here related, as it forms another instance showing that the application of a single ligature above the wound of the artery is not always equal to the cure of this kind of aneurism.* There are also some other points in the case which are well worthy the notice of the pathologist.

CASE II.—H. Chambers, a young man, had been bled in the arm while residing in the West Indies, in the year 1820. The fore-arm was observed to be black afterwards, and in the course of two or three days a small pulsating tumor was discovered on the fore part of the elbow-joint. By degrees the tumor attained the size of a large walnut. In April 1820, a surgeon applied a ligature round the brachial artery, three or four inches above the tumor. After this, according to the patient's account, the pulsation ceased, and the tumor became diminished in size; but the operation was followed by severe pain, and at the same time by a sense of numbness of the hand. The pain subsided in the course of a few weeks, but the numbness remained. At the end of two or three months, it was discovered that the pulsating tumor had returned. The tumor increased in size, and the patient came to England, and was admitted into St. George's Hospital in the beginning of September 1820.

At this time there was a pulsating tumor on the fore part of the elbow, of the size of a pigeon's egg. On making a light pressure on it with the ends of the fingers, besides the pulsation, a peculiar thrilling sensation was perceptible, different from that which is perceived in common aneurism, and corresponding to that which is described as being produced by a varicose aneurism.

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* Mr. Brodie observed, that in another case in which he had tied the brachial artery in the middle of the arm, on account of an aneurism from bleeding in the usual situation, although the immediate effect of the ligature was to stop the pulsation of the aneurism, the pulsation returned on the following day, and continued (more feeble, however, than before the operation,) for nearly a month. After that period it gradually ceased, and the tumor disappeared.

On the 7th of December, Mr. Brodie performed the following operation:—He made an incision on the brachial artery, one inch and a half above the aneurism, and tied that vessel with a single silk thread. At first it was supposed that the pulsation of the aneurism had ceased: in a few minutes, however, the pulsation returned, though not quite so strong as before the application of the ligature. A tourniquet was then applied in the arm, and an incision was made into the aneurismal sac. Some coagulum which lay in the sac having been removed, the inner surface of the sac was seen lined by a thin, white, polished membrane. On the tourniquet being loosened, arterial blood flowed through a large orifice which was manifestly that of the brachial artery. A second ligature was therefore applied to this vessel, immediately above the aneurism. There were still two other orifices communicating with the sac. One of these was manifestly that belonging to the lower portion of the brachial artery, through which also arterial blood flowed in a considerable stream, on the tourniquet being loosened. Another ligature was therefore applied to the brachial artery, immediately below the aneurism. Still, on loosening the tourniquet, blood flowed through the third orifice; and it was observed that there was here a double current, composed partly of venous, partly of arterial blood. It was evident, therefore, that this orifice communicated with both an artery and vein; and, the blunt end of a probe having been introduced into it, so as to mark its situation, a fourth ligature was applied close to the sac, so as to intercept at once the communication with both of these vessels.

The edges of the wound were brought together by means of straps of adhesive plaster. The ligatures separated at the end of ten days, and the wound healed without any evident suppuration of the inner surface of the aneurismal sac. The patient quitted the hospital cured in about a month after the operation.

From what was observed in this case, we must conclude that the aneurism communicated not only with the wound of the artery, but with that of the vein also, so that it might be considered as a complication of common and varicose aneurism. This complication has been noticed by Dr. HUNTER, and appears to be not uncommon.

An example of it was met with in a patient who died in St. George's Hospital, in the year 1818, under the care of the late Mr. GRIFFITHS, two or three months after he had been wounded by an iron spike, which entered the groin, and penetrated under Poupart's ligament. There was a puncture of the external iliac vein, and another of the external iliac artery, and a large aneurismal sac which communicated with both of these vessels.

DEATH FROM EATING BITTER ALMONDS.

A Case of a Man who died from eating to excess of the Bitter Almond, by Mr. KENNEDY. *With some Remarks,* by Dr. PARIS.

September, 1825, I was called to see a man stated to have fallen down dead in Trinity-street, Borough. I went immediately to the spot, and found the poor fellow laid upon timber, supported by some labourers. I directed him to be taken to the Roebuck Inn close by. At this time the pulse was scarcely perceptible at the wrist, and the extremities were quite cold. The account given by the person who first took notice of him (a master builder) was—that he saw a man, apparently in pain, endeavouring to make water against the wall, and as if he were sinking down: he called out to him; but the man took no notice, and in a minute afterwards fell. He ran to him, but neither heard a sigh nor groan.

On his being removed into the house, I attempted to bleed him from the jugular vein, and then from the arm: about an ounce of very dark-coloured blood flowed. He was laid upon a table, and there fell out of his pocket some bitter almonds: this led me to the conjecture that he had been poisoned by eating them; and I was further convinced of it by perceiving the peculiar odour of the hydrocyanic acid in his mouth. I then ordered him a glass of hot brandy and water: after this had been poured down his throat, a stream of blood flowed from his arm, which was still kept bound; and I thought I felt the heart beat, but I did not feel the pulse. Another glass of hot brandy and water was given, but life was now extinct. The eyes, which had been natural, were fixed but shining, (which appearance they retained for some time;) while foam and mucus issued from his mouth and nares.

The following morning, twenty hours post mortem, I made the examination in company with a friend, Mr. JOHN HILL, surgeon. The body had more of a purplish hue than usual, particularly where any pressure had been applied,—as on the arm where the fillet had been bound, on the neck, &c. Mr. Hill placed his hand on the chest, and said "There is some degree of warmth here;" but I could not perceive it: however, another gentleman, (not of the profession,) then in the room, was of Mr. H.'s opinion.

I may remark here, that I had been before much surprised and puzzled to find the extremities cold, while much warmth remained about the chest. I ordered hot fomentation, which, of course, was of no avail; and more than four hours after, when I was fully convinced life was gone, I felt considerable warmth at the chest: he was laid in a shell, and in a cold room.

The large vessels of the brain were distended with blood, as in apoplexy, but the organ was otherwise sound and healthy in its substance. The heart and lungs were healthy. On opening the abdomen, and exposing the stomach, it was found immensely distended, and strongly smelling of the hydrocyanic acid. I removed it carefully, and, on laying it open, some gas escaped. A quantity (two pounds at least) of undigested matter was in it, amongst which many pieces of almonds could be distinctly seen: indeed, the mass appeared to consist of little else. No inflammation of the stomach, of the large or small intestines, could be traced. The bladder was filled with water.

On searching his person to discover his residence, his pockets were all found more or less filled with bitter almonds; he had not a halfpenny in them: he looked very poor. We had no hesitation, therefore, in concluding that this man had died from the effects of the essential oil, or prussic acid, contained in the almonds, having eaten a large quantity to allay the cravings of hunger. I accordingly gave my deposition before the magistrates at Union Hall to this effect.

The man was of the middle size, strong and muscular; aged about forty years; his name and residence unknown.

Dr. Paris, in a letter to me on this subject, says, "There cannot be a doubt but that the death of the person was occasioned by the poison of the almond, although it may perhaps be said that the distention of the stomach by so undigestible an aliment might have occasioned congestion in the brain, and thus produced death. I am, however, of a different opinion. The warmth about the chest has been frequently observed in cases of narcotic poisoning. You have not stated distinctly whether the eyes retained their lustre; a fact which I consider as decisive evidence of poisoning by hydrocyanic acid. Mr. Earle informed me that, in the case of a professional man who had destroyed himself by the prussic acid, the glistening of the eye was so remarkable, that he almost hesitated whether he should proceed to the dissection."

I would observe, that some difference may be expected to be found in the appearance of different individuals, occasioned by the quantity as well as the quality of the poison taken; and I have lately heard of a case which strongly illustrates this, related by a friend, in which a considerable quantity of the hydrocyanic acid of the shops was taken, occasioning instant death, and yet, on dissection, the odour of the poison was not perceived in the stomach, but the coats were in a state of high inflammation.

CRITICAL ANALYSES.

Quæ laudanda forent, et quæ culpanda, vicissim
Illa, prius, cretâ; mox hæc, carbone, *notamus*.—Persius.

A Treatise on the Diseases of Children; with Directions for the Management of Infants from the Birth. By the late Michael Underwood, M.D. *Eighth Edition, revised, with Notes and Observations*, by Samuel Merriman, M.D. F.L.S. Corresponding Member of the Imperial and Royal Academy of Sciences at Siena.—8vo. pp. 636. Callow and Wilson, London, 1827.

The present publication has been long anxiously expected by the profession; for, whatever might have been the merits of Dr. Underwood's book when it was originally published, it could not, in the present day, be considered a satisfactory treatise on infantile diseases. It contained much that might fairly have been omitted, and touched but lightly upon many important subjects which obviously required a more detailed consideration. There was also a triviality of manner in the composition of it, which has not escaped the observation of the present Editor, and which was more likely to attract the attention of mothers and nurses, who might aspire to take upon themselves the duties of physicians in their own families, than of medical students or practitioners.

Upon more than one occasion, we have expressed our favourable anticipations of the forthcoming edition of Dr. Underwood's book, which was known to be under the superintendance of Dr. Merriman, whose extensive experience upon the subject is as well known as his talent is generally admitted. We imagined, however, that the new edition was to be prepared upon an entirely different plan. We were in hopes that, although, as a mark of respect, the name of the original author might still be allowed to appear in the title-page, each chapter nevertheless would have been remodelled; and that the profession would have had the benefit of the general results of Dr. Merriman's observations, unincumbered by the errors which subsequent experience has detected in the performance of Dr. Underwood. We confess that we are disappointed; and we are much deceived if the regret will not be universal, when it is seen that Dr. Merriman has added but a few short foot-notes, in explanation, or correction of errors which are still allowed to occupy the pages of the book.

In 1819, Dr. Underwood, then far advanced in years, revised the last edition of his work, which is now out of print, and the proprietors applied to the present editor to prepare a new edition for the press. We sincerely wish that he, who possesses the ability of giving an original work to the public upon the same subject, had not undertaken the subordinate office of supervising and correcting the labours of another.

It would appear from the preface, that Dr. Merriman does not consider himself responsible for the doctrines contained throughout the work. "If the difference of opinion does not involve any material point of practice, he has not always thought it necessary to express dissent; but, on other occasions, he has inserted in a note what he considers to be preferable doctrine; and, throughout the volume, the editor has marked with the initials of his name the opinions and remarks for which he is answerable." The notes which have thus been added by Dr. Merriman would occupy, at most, about six pages of the book.

It appears from the preface to the seventh edition, that Dr. Underwood was the first to recommend the frequent use of calomel, both in large and frequent doses, in the treatment of the diseases of children. This very valuable medicine had not been advised by any other writer, before the appearance of the first edition of his work. That this favourite, and now too freely applied, remedy, has frequently been carelessly and indiscriminately resorted to, is very certain; but we are much indebted to Dr. Underwood for having first publicly stated the power which the judicious use of calomel possesses of alleviating, and even curing, many diseases of early life.

Some difference of opinion exists as to the advantages of administering Antimony to children. Dr. Underwood conceives that this medicine is too indiscriminately condemned in the "London Practice of Midwifery."

> "The work here alluded to is "The London Practice of Midwifery," first published in 1803. It is a surreptitious copy of the late Dr. Clarke's Lectures, taken by a pupil, who committed very gross mistakes in various parts, and in others made the subject quite unintelligible. The merits of the work have notwithstanding carried it through five editions, in the latter of which many of the mistakes and errors have been corrected.—S. M." (P. xviii. *note.*)

Dr. CLARKE makes the following remarks upon this subject:—"In the early stage of bowel complaints in infants, no remedy is so useful as an emetic; and ipecacuanha is the best and safest emetic that can be given. Tartarised antimony is sometimes dangerous, and there are instances recorded where children have died under its operation, even when given in very small quantities. In one case, two grains were dissolved in an ounce of water, of which half a teaspoonful was given every quarter of an hour till it produced vomiting, which, when it took place, never ceased till the child died. Such violent effects never happen from ipecacuanha; two or three grains of which may be given every quarter of an hour till it vomits."

Dr. Merriman has "been induced to insert this extract, because his own experience of the occasional ill effects of antimonial preparations agrees with that here recorded. He has several times witnessed mischievous consequences from the indiscreet use of this remedy. The mode in which it is often directed to be given is a very dangerous one. "Let it be given every ten or fifteen minutes till it produces vomiting," is a very common, but very injudicious, prescription. No emetic ought to be persevered in if the child, after two or three suitable or usual doses, does not cast its stomach,—unless under the especial direction of some skilful practitioner. The indiscriminate use formerly of antimony, and now of calomel, has been, and still is, productive of much evil."

The practice of giving an emetic "in the early stage of the bowel complaints of children," is not generally adopted by the practitioners of the present day, although it is sanctioned by the authority of Dr. Clarke. With few exceptions, more benefit will be derived from the skilful management of purgatives.

Dr. Underwood offers many useful observations upon the plan to be adopted when infants are apparently "still-born." His success was great in such cases, and, in his own opinion, was owing to "unwearied assiduity and perseverance in his attempts, whenever there were no certain signs of death." The means to be employed on such occasions "consist only of warmth, clysters, stimulants, and especially blowing forcibly into the trachea." Dr. Merriman observes, "that a very general excitement of nervous energy is frequently produced by gently rubbing and irritating the soles of the feet with a nail or tooth-brush." It is not a little remarkable that, amongst the means of *rousing* apparently still-born children, Dr. Underwood should enumerate *tobacco* clysters. Dr. Merriman very properly condemns the practice, by observing, "that tobacco clysters so often produce syncope, that it seems extraordinary they should be recommended in such a case as this. All direct sedatives, of which tobacco is one, are likely to be prejudicial in this state."

Upon the subject of "bringing up children by hand," we have the following important statement from Dr. Merriman, which we submit to our readers, although it by no means accords with the result of our own observations.

> "It has been a part of my duty (says Dr. M.) to endeavour to ascertain the amount of mortality among infants from this source; and, after much careful inquiry and investigation, I am convinced that the attempt to bring up children by hand proves fatal, in London, to at least seven out of eight of these miserable sufferers; and this happens whether the child has never taken the breast at all, or, having been suckled for three or four weeks only, is then weaned. In the country, the mortality among dry-nursed children is not quite so great as in London, but it is abundantly greater than is generally imagined. The summer is the most favourable season for making the attempt; but, if parents were fully aware of the hazard to which their children are exposed in the endeavour thus to bring them up, they would rarely choose to place them under the care of the dry nurse." (P. 3.)

We are fully sensible of the moral obligation which is imposed upon every mother of suckling her own child, if possible; but circumstances may occasionally render it necessary to bring children up by hand, and, provided the food administered to them be proper in quantity and quality, we really should not be inclined to rate the average loss so high as that stated by Dr. Merriman.

Dr. Underwood observes, that "it has long been suspected, and of late years more generally imagined, that some of the worst fevers, and more rare ill effects of child-bearing, may be prevented by suffering the milk to flow duly to the breasts, and be freely drawn from them, though only for the month. These advantages, one should hope, might tend to induce ladies of rank to set a general example, by performing this kindest and most pleasant office, at least during the month." Upon this point Dr. Merriman observes—

> "I cannot agree in opinion with Dr. Underwood, that it is right to recommend ladies to suckle, 'though only for the month,' if they do not intend, or have already determined not to persevere in performing that office. On the contrary, I think, if they are to suckle their children 'only during the month,' that it is better, both for themselves and their infants, (who under these circumstances are never half suckled,) not to make the attempt for that short time.
>
> "The first month of suckling is confessedly attended with more of uneasiness and suffering than is afterwards felt: indeed, after the first difficulties are overcome, this duty is accompanied with sensations of the greatest pleasure and delight; and it seems cruel to require of the mother to undergo all the trouble and pain of suckling, when she is to be debarred of all its pleasures.

"But we are told, 'it has long been suspected, and of late years more generally imagined, that some of the worst fevers, and more rare ill effects of child-bearing, may be prevented by suffering the milk to flow duly to the breasts, and be freely drawn from them, though only for a month.' If this be only suspected and imagined, much dependence cannot be placed upon the opinion. As regards the mammary abscess, I have much more frequently witnessed its occurrence when the mother has attempted to suckle for the month only, than when she has altogether declined putting her child to the breast. Certainly, if the mother is not to nurse her babe, particular care ought to be taken to guard against fevers, and other ill consequences; and, with such care, they are not much to be dreaded. The suckling of an infant is too serious a matter to be played with; and, if there be not a reasonable hope that the mother will be able to perform this duty completely, she had better at once resign the charge." (P. 5.)

Dr. Underwood was a zealous advocate for the use of the cold bath in the general management of children; and it is only to be apprehended, in the opinion of Dr. Merriman, "that on many occasions the rule he has laid down has been remembered, while the very important exceptions have been overlooked or forgotten, and the consequence has been too often the abuse of a beneficial practice." We perfectly agree with Dr. Merriman upon this subject. The popular and injudicious use of the cold bath, and exposure to cold air, with the view of "bracing" the child, whatever may be its constitution, are prejudices which have taken too firm a hold of the public to be willingly abandoned; and Dr. Merriman is doubtless correct in supposing that the "strongly expressed opinion of Dr. Underwood, of the absolute necessity of inuring very young infants to endure the cold air, as essential to their health, has been productive of great and extensive mischief."

Dr. Merriman offers some remarks upon the subject of abstracting blood from children, which are too practically valuable to be passed over.

"As it is always difficult, and sometimes impossible, in very young subjects, to draw blood by opening a vein with a lancet, it is usual to employ either leeches or cupping glasses for this purpose.

"Leeches are commonly preferred, being thought a less severe remedy than cupping, though in fact they frequently prove more severe and troublesome. The chief objections to the use of leeches are—1st. The difficulty of applying them. 2dly. The length of time which is consumed while they are drawing, and afterwards while a sufficient quantity of blood is flowing from the orifices; a length of time during which the active employment of other indispensable remedies is prevented. 3dly. The great uncertainty as to the quantity of blood obtained: this being sometimes so inconsiderable, as not at all to answer the purpose; at other times so great and uncontrolable, as to exhaust and debilitate the patient excessively. Instances are not rare in which, from the neglect of putting a timely stop to the flow of blood, infants have been actually destroyed by the gradual but overwhelming loss.

"Whenever a good cupper is to be met with, this mode of procuring blood is greatly to be preferred. He can apply his cups upon any part that may be required, and will draw blood from infants, even during the month, with great address and expedition. He will take away the exact quantity prescribed, even to a quarter of an ounce. The operation is quickly over, and, of course, the advantage of taking away the necessary quantity at once is obtained. There is no delay in employing other appropriate remedies; nor is there the fear that, through the practitioner's absence, the child will sink under the profuse discharge of blood, which has sometimes oozed, unobserved or unattended to, from the bites of leeches.

"In determining the quantity of blood to be taken away, so much depends upon the peculiar case to be treated, as well as upon the constitutional and relative strength of the child, that no precise rule can possibly be laid down. The attending practitioner must exercise his best judgment in directing the proper quantity, and he will often find it expedient personally to superintend the operation of cupping, in order to insure the complete effect which he expects from the loss of blood. It may, however, be useful to remark, that, during the first six weeks of life, from five drachms to an ounce of blood will commonly relieve the inflammatory symptoms; from six weeks to three or four months, one ounce, or an ounce and a half, will answer the purpose; and in this proportion bleedings may be adopted at subsequent periods of infantile life." (P. 299.)

Amongst other remedies for Scald-head, Dr. Underwood mentions the external application of a strong decoction of tobacco. Dr. Merriman observes, that a case of stupor ending in death occurred a few years ago at Shoreditch, from the incautious manner in which a father washed the head of his child with that application.

Ten or twelve cases of Imperforate Rectum have occurred in the practice of Dr. Merriman.

"In several of these cases, the delay of the operation appeared to be the principal cause of its failure. But I attribute the failure more frequently to the mode of operating, which was generally by passing a trocar, sometimes of too small a size, into the rectum: this never failed to give a temporary relief to the symptoms, by producing an evacuation of the meconium, but the aperture could seldom be kept properly open, though bougies and sponge-tents were used to preserve a passage. In one instance of this kind, the child lived six months, and then died, with an immensely distended abdomen.

"In two cases a perfect cure was effected: these children were both operated upon by the late Mr. Chevalier, who, with a scalpel, made a very free incision through the integuments, till he distinctly felt the fluctuation of meconium in the rectum; he then carried his instrument through the membranous expansion, or pouch, in which in these cases the rectum generally terminates; taking care effectually to divide it by a crucial incision, thus completely destroying its valvular structure. Both these children recovered without difficulty, and possessed the faculty of retaining, or expelling, the fæces nearly as well as if no malformation had ever existed. One of them is now fifteen years of age." (P. 616.)

We have presumed that a detailed review of Dr. Underwood's work could not be expected of us. We have, therefore, touched only upon those few points upon which Dr. Merriman has very briefly stated his opinion. In many respects the present edition has been much improved. The work was formerly printed in three duodecimo volumes, it is now thrown into one octavo. Dr. Merriman has also very properly given the "directions for the management of infants from the birth" at the commencement of the book. The consideration of such a subject ought certainly to precede, rather than to follow, a Treatise on the Diseases of Infants, although, in Dr. Underwood's editions, it occupied the last volume.

Notwithstanding Dr. Merriman has pruned the style of Dr. Underwood, by cutting out a number of such expressions as the "*little* smiles, *little* tears, *little* bowels," &c. &c. of the infant, the composition of the work is still trifling and faulty. If Dr. Merriman had favoured the profession with an original Treatise upon the Diseases of Children, it might probably have been of less use to "discreet and intelligent mothers of families," because the subjects would have been treated in a more scientific manner, and the performance would doubtless have been above the level of female readers, but it would have been a much more valuable addition to the professional library than a revised and improved edition of Dr. Underwood.

The blank in English medical literature, which has long been regretted, is yet to be filled up; for we cannot, in justice to our readers, recommend the volume before us as a full and complete treatise on the diseases of children; although we willingly admit that it contains some useful information, and that Dr. Merriman has much improved upon the former editions, both by his additions and omissions. In our opinion, however, he has been much too sparing of both.

A Nosological Practice of Physic, embracing Physiology. By GEORGE PEARSON DAWSON, M.D.—8vo. pp. 380. Longman and Co. London.

THE present work, we are informed in the advertisement prefixed to it, is the result of twenty-eight years dedicated to the study and practice of medicine. The object of the author is to exhibit general views of the principles and treatment of diseases, interspersed with classical, physiological, and pathological facts and observations. "Dissatisfied with existing Nosologies, he has constructed one for himself, which is simple, intelligible, and consentaneous with his own experience."

In the arrangement adopted by Dr. DAWSON, five orders are admitted: 1st. Febrile Diseases; 2d. Inflammatory Diseases; 3d. Nervous Diseases; 4th. Cachectic Diseases; 5th. Functional Diseases. The whole of the species and varieties of each order are arranged under a single genus. The generic definition is first briefly stated, and the species and varieties are then separately considered. It is obviously necessary that some arrangement of diseases should be adopted, particularly when we undertake to impart to others the information we may have derived from experience, or the result of our own reflections. But, to speak sincerely, we are not very anxious upon the subject of the mere arrangement of diseases. The simpler the classification, the better. Nosology can but embrace the boldest forms of disease. There must be varieties of every malady constantly occurring, which no nosologist can anticipate; and, consequently, all the attempts that have been made to enumerate every possible variation of disease have been unsuccessful, and have only served to increase the already overloaded vocabulary with words that many never understand, and few ever remember. The great end of all our labour must be the cure of disease; and how often, we would inquire, do we find ourselves assisted at the bedside of the patient by artificial arrangements? They may, to a certain extent, simplify the labours of the student; and this is the only use we can fairly assign to them.

Dr. Dawson's division is simple and perspicuous, and is well adapted for a work intended to give only general views of disease. Like other works on the Practice of Physic, the volume commences with the subject of Fever. Dr. Dawson takes but a very superficial survey of it. He does not even touch upon many important questions relating to it, which, although they have excited the attention of numerous writers, are still left in doubt, and would consequently admit of still further investigation. The following passage contains an opinion in direct opposition to most authorities, who have particularly treated of the various functional or structural derangements so frequently consequent to remittent fevers.

> "When marsh fevers have affected the system for a very long time, they too often induce considerable debility, hepatic obstruction, visceral disease, and dropsy; or they are combined with pulmonic affections, obstinate dysenteries, or incontrollable diarrhœas, some of which are usually beyond the ordinary control of medicine. I never knew mercury productive of the smallest benefit: it only added weakness to weakness, and accelerated, rather than retarded, a fatal termination; yet calomel to affect the bowels, opium to remove pain or assuage distress, and warm port wine to impart comfort, have, in my own practice, certainly not limited, succeeded beyond my hopes." (P. 17.)

In our opinion, the exhibition of small doses of mercury, together with other appropriate treatment, is very necessary in most cases of local disease, or derangement of function, induced by intermittent or remittent fevers.

We must also enter our protest against the treatment recommended in that species of fever denominated Synochus. "The treatment of synochus consists in an emetic, if there be nausea or uneasiness in the stomach; *a large bleeding at the onset of the febrile attack*, and that repeated according to circumstances; together with liberal purging, and blisters for local pain." Possibly, the use of the lancet at the commencement of simple continued fever may be sometimes necessary; but it must be in cases where the general symptoms indicate synocha rather than synochus, or where some particular organ is evidently labouring under inflammatory action. If the general rule laid down by Dr. Dawson were acted upon, and "a large bleeding" abstracted at the commencement of every case of simple continued fever, we are convinced much mischief would ensue. We confess our observation is founded upon the inferences we have drawn from watching the progress, and treatment required, of the continued fevers of this crowded metropolis. Dr. Dawson's advice, however, is delivered too exclusively: no exceptions whatever are made to the treatment he recommends.

We agree with him in the propriety of administering emetics at the beginning of fever, if there be symptoms of gastric derangement. Fashion, which bears as much sway in medicine as in manners, has, in the present day, almost driven emetics from our list of remedies in fevers. In many cases of simple continued fever, the active interference of the physician will not be required. He should at all times watch with attention the progress of the symptoms from day to day; but when nature herself is evidently, although gradually, operating a restoration to health, he should deliberate maturely before he opposes her steps, by adopting what is termed a decided mode of practice, which may, it is very true, sometimes give a momentary eclat to the character of the practitioner, but more frequently proves prejudicial to the patient.

We observe Dr. Dawson pays Dr. CLUTTERBUCK a very curious kind of compliment. "Dr. Clutterbuck, with an ingenuity and talent which do him honour, has asserted and attempted to prove fever to be, at all times, an inflammation of the brain.—This will not do: it is to mistake an occasional effect for a constant cause. But for this unhappy prepossession, he would have ranked high among the authors on Fever; since it is not easy to discover his superior." If Dr. Dawson were to employ a builder to erect him a substantial dwelling, the foundation of which was afterwards discovered to be unstable, would he complacently remark, "he would have ranked high among the builders of houses, but for the single fault of laying a rotten foundation?" The cases appear to us to be parallel: both the house and the hypothesis would be remarkably good, if they had but a foundation.

Rubeola is said by the author to occur only once during life. It is, however, of much importance for practitioners to remember that several exceptions have occurred to this general rule. Dr. BAILLIE has published some cases of secondary measles; and, in our own more limited experience, we have seen several similar instances which were too strongly marked to admit of doubt. The black measles, mentioned by WILLAN, and of which no case has fallen under Dr. Dawson's notice, is by no means common. Whenever the eruption does assume a darkened hue, much apprehension is entertained by the friends of the child. There is, however, no greater degree of danger in these cases than in the usual forms of the disease. We are told that "blood-letting may be safely and expeditiously performed in the veins of the hand" in children. We confess we are very sceptical upon this point.

Dr. Dawson not unfrequently amuses us by the brevity and ease with which he dismisses many questions, that other writers have considered involved in much difficulty. For example, after having given twenty lines to the consideration of Variola, without a word upon the modified disease which occurs after vaccination, he observes, that "the symptoms narrated will sufficiently distinguish varicella from variola."

If he had entered upon the task of distinguishing from varicella the modified variola to which we have referred, he would perhaps have confessed that the diagnosis is not so easy.

Upon the subject of Otitis we find some pertinent remarks.

"Inflammation of the ear, although an apparently unimportant affection, is always to be narrowly watched, since, from its proximity to the brain, fatal consequences may arise. Two cases of this nature terminated in death, under the care of my friend Dr. Brown, of Sunderland, whose acuteness and talents render him an ornament to the medical profession. The first was a young man, who was affected with purulent discharge from, and excrescences in, each ear. In London he used strong injections, composed of the sulphate of copper, which considerably lessened the discharge, and he returned under the impression of having been cured. Soon after, he was seized with phrenitis, to which he fell a victim. A middle-aged lady was the subject of the second case: in her, otitis advanced into phrenitis, and destroyed life in a few days.—In both cases the most active treatment was pursued: liberal venesection produced striking, but only temporary, relief.

"In otitis, the ear should be fomented, or warm water syringed into it; the bowels freely opened; and leeches, as well as a blister, applied. But, whenever the face is flushed, the pulse quickened, and the pain severe and shooting into the head, liberal venesection is demanded, and ought to be repeated, if the urgency of the symptoms be not checked; for, in some instances, universal pain, delirium, and coma supervene. Where suppuration threatens, warm poultices must be applied, and likewise tepid injections used. Occasionally, suppuration proceeds to the complete destruction of the whole of the internal ear, and the bones are discharged through the meatus auditorius, with much purulent and fetid matter. Here little is to be done beyond attending to the general health, and the adoption of strong injections of oak-bark and other astringents." (P. 60.)

Dr. Dawson is of opinion, "that, when phrenitis appears, it is impossible to ascertain whether the membranes or the brain itself are inflamed: nor is it of any importance, since the treatment does not vary. The probability is, the membranes are first inflamed, and that the inflammation, if not speedily subdued, extends itself to the substance of the brain." We believe he is correct upon this point, notwithstanding the attempts that have been made by many of the French pathologists to distinguish the particular seat of inflammation, and the numerous divisions they have proposed, each designated by its corresponding appellation. Can any thing but ignorance or affectation induce any man to pretend that he can, during life, distinguish inflammation of the arachnoid from that of the pia mater?

After having given a slight sketch of the progress and treatment of Enteritis, Dr. Dawson introduces the following case, which should be attentively considered, particularly by junior practitioners, whose reputations would materially suffer from the loss of a patient under such circumstances. Upon this very important subject we may refer our readers to the interesting little volume of Dr. MARSHALL HALL, which we noticed in our Number for December. The case related by the author shows that not only life, but even rationality and locomotion, can go on under enteritic gangrene.

"Mr. N—, aged thirty-seven, in December, 1818, after having been very cold the day before, was seized with enteritis: the usual practice was employed, and in five days he was pronounced convalescent. He remained weak, free from pain, speaking in a whisper, from Thursday to Sunday; and on that day he dined in another room with his wife and friends, ate the wing of a chicken, and drank a glass of wine. At one on the following morning, when all was sunshine, he was almost instantaneously attacked with agonizing pain in his bowels, and insuppressible inclination to go to the night-chair. The pain increased, he sank rapidly, was covered with clammy sweats, and died in five hours! On dissection, the colon was found black in several places; and there were a few holes near the sigmoid flexion, through which a quantity of hardened feces had passed into the pelvic cavity, and were floating in fluid. The cavities of the thorax were full of water.—In this unhappy case, in consequence of the cessation of pain, gangrene had been mistaken for convalescence; and it is obvious that the agonizing pain, prior to dissolution, arose from the separation of the dead from the living intestine." (P. 91.)

"Pancreatitis," says Dr. Dawson, "is a stranger, introduced by myself into the temple of Nosology, where it has an undoubted right of admission, although unjustly excluded by several nosologists." We find, however, that inflammation of the pancreas is also mentioned by Dr. GOOD. The disease is very rare, and perhaps never indicated by any symptoms which could lead us to detect its existence. "The temple of Nosology," therefore, is not much honoured by the introduction of such "a stranger."

To obviate the distressing pain that in general accompanies Nephritis, we are perfectly aware of the necessity for the free exhibition of opium, after the treatment required for other inflammatory affections, with the exception of blisters; but we apprehend our author is imprudent in recommending "not less than two drachms of the tincture of opium every two hours, until a sensible effect is produced." In many cases, we should find the first *sensible* effect would be the *insensibility* of the patient, notwithstanding the modifying influence that pain certainly exerts over the operation of narcotic medicines. We have seen many cases of nephritis, and have succeeded in relieving the sufferings of the patients by much smaller doses. We should not prescribe more than thirty or forty minims as a first dose, and afterwards, if necessary, ten or fifteen minims every two or three hours until relief is obtained. Occasional exceptions may doubtless arise, in which a more liberal use of opium may be demanded.

While upon this subject, we may throw in an observation that may not be considered altogether irrelevant, with respect to the relative power which the Tincture of Opium and Battley's Liquor Opii Sedativus possesses in relieving pain. For this purpose, the latter preparation is decidedly inferior to the former, even in larger doses, although it has the advantage of not producing constipation of the bowels, nor that heaviness of head and clammy state of the mouth, which are well known to arise from laudanum. In many cases, when we have no severe pain to conquer, it is a nice question to determine whether any preparation of opium can with propriety be employed for the purpose of diminishing excessive irritability; and in such instances we should certainly prefer the preparation of Battley, particularly if the action of the heart and general vascular system appeared to be increased.

Passing over several very superficial sketches of other inflammatory affections, we arrive at "Order III. Nervous Diseases," the "generic definition" of which is—

> "The brain, nerves, and muscles, singly or simultaneously disordered; denoted by aberration of mind; loss of sense, of voluntary motion, and stertorous breathing; depravation or abolition of the sense of external parts; affections of the nerves or muscles." (P. 177.)

Upon the subject of Mania, Dr. Dawson opposes himself to the peculiar views of Mr. LAWRENCE and other authorities, who contend that madness is the effect of disease of the brain. The dogmatism with which Dr. D. delivers his opinions is much to be lamented. It would not require the acumen of Mr. Lawrence to point out the many inaccuracies with which his observations upon mania abound. We cannot enter at large upon so extensive a question, but we may inform Dr. Dawson that he is in error when he states that "every enlightened man in the medical profession" will deny that "disease of the brain, or its membranes, is commonly discovered;" and he is, *a fortiori*, wrong in asserting that "it is admitted, most unequivocally, that disease of the brain is rarely met with in maniacal patients." The question is still involved in doubt, but there are as many authorities who contend that some disease or preternatural condition of the brain is the usual cause of mania, as there are in support of the dogma of Dr. Dawson. As a proof that "every enlightened man" does not acquiesce in his views, we shall quote but one writer, although it would be easy to accumulate evidence upon this point. HASLAM,* after having related many cases, observes, "From the preceding dissections of insane persons, it may be inferred that madness has always been connected with disease of the brain and of its membranes. Having no particular theory to build up, they have been related purely for the advancement of science and of truth. It may be a matter affording much diversity of opinion, whether these morbid appearances of the brain be the cause or the effect of madness. It may be observed, that they have been found in all states of the disease. When the brain has been injured from external violence, its functions have been generally impaired, and inflammation of its substance, or more delicate membranes, has ensued. The same appearances have, for the most part, been detected when patients have died of phrenitis, or in the delirium of fever: in these instances, the derangement of the intellectual functions appears evidently to have been caused by the inflammation. If in mania the same appearances be found, there will be no necessity of calling in the aid of other causes to account for the effect: indeed, it would be difficult to discover them."

Dr. Haslam then proceeds to argue the point with those who suppose *a disease of the mind,* but with a deference for the opinion of others, which Dr. Dawson would imitate with advantage. "When we find insanity," says Dr. Haslam, "as far as has been hitherto observed, uniformly accompanied with disease of the brain, is it not more just to conclude that such organic affection has produced this incorrect association of ideas, than that a being, which is immaterial, incorruptible, and immortal, should be subject to the gross and subordinate changes which matter necessarily undergoes."

Continuing his observations upon the subject of mania, Dr. Dawson, with the same authoritative tone, "meets Mr. Lawrence on his own ground, and tells him that *none* but mental remedies are of *any* use in *every* species of mental derangement." We know not the extent of the author's experience, and cannot but regret that the sources from whence his opinion is derived are not stated. Highly as we estimate the importance and necessity of moral treatment in every kind of mental aberration, we have yet to learn that its application, however judiciously directed, is to be trusted to *alone*, and *unaided* by other auxiliary remedies.

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* Observations on Madness, 2d edit. p. 238.

In the section on Convulsion, the subject of puerperal convulsions is incidentally noticed, and again we have to lament the decisive tone with which opinions are delivered upon a subject of such vast importance. After having had recourse to blood-letting, which is to be promptly and largely employed, "if delivery be not effected, or the placenta not extracted, manual efforts must be adopted." It is probable that Dr. Dawson's book may not be particularly consulted as an authority upon this point, and we would guard the junior members of the profession not hastily to act upon the crude direction of interfering by "manual efforts," which may or may not be required; nor, without very mature deliberation, "to ask for a pair of scissors, thrust their points into the head of the child, and scoop out the brain with their fingers," when the head of the child is "without the mouth of the uterus." We have had considerable experience in the practice of midwifery, but it has never yet fallen to our lot to be obliged to have recourse to the horrible duty of destroying the child in cases of puerperal convulsions. We know that such cases may occur; but we must be allowed to reprobate, most forcibly, the manner in which the case is related in which Dr. Dawson, with so much promptitude, "scooped out the brains with his fingers." Such a case ought to have been very circumstantially detailed, and might, with much propriety, have been accompanied by some observations from a man of Dr. Dawson's age and experience, for the instruction of his junior brethren, that they might not rashly or unjustifiably have recourse to so responsible a proceeding.

"Order IV. Cachectic Diseases."—Phthisis Pulmonalis. We are inclined to agree with Dr. Dawson in his restriction of this term. The loose and indefinite manner in which it is often applied by many practitioners, not unfrequently leads them to form an erroneous estimate of the value of particular remedies, and of their own successful practice in this formidable disease.

"The amiable and venerable Dr. Duncan, of Edinburgh, has divided phthisis pulmonalis into three kinds,—namely, the *catarrhal*, *apostematous*, and *tubercular*; and, agreeably to his views of the subject, he might have added a fourth, and designated it the *hemoptyst*. The hemoptyst arises in this manner:—A person, most generally of a bad or weak constitution, suffers an attack or attacks of hæmoptysis; but a vessel, or perhaps vessels, in his lungs, instead of healing, degenerate into a small ulcer or ulcers; and thus originate cough, expectoration, irritation, and other symptoms. It was the frequency of this occurrence which led Cullen to contemplate phthisis as nothing more than a sequel of hæmoptysis. For my own part, I attach no importance to these divisions, and consider them, with the exception of the tubercular, to be fundamentally erroneous. Let us pursue this subject farther, to prevent misconception, and to establish precision. There is only one kind of phthisis pulmonalis, and that is the tubercular, which may be conveniently and practically divided into two stages: the first, the occasional formation and inflammation of tubercles in the lungs; the second, the suppuration of them. The tubercles in a suppurative state constitute genuine pulmonary consumption: there is no other." (P. 272.)

We observe nothing that particularly requires our attention in the consideration of "Order V. Functional Diseases." Upon the subject of Sterilitas, the following remarks are made, which are probably not without foundation.

"An honest man is seldom a father in the year he is made a bankrupt. Severe intellectual exertions on the part of the husband will frequently cause temporary sterility in the wife, which will continue until such exertions have ceased. Dr. G——, now of London, who at this moment is considered by many as one of the ornaments of the medical profession, was married, in 1811, to an interesting and lovely young woman, by whom he had two fine children. He commenced author; bestowed great intellectual labour on three successive works, all well known, and one abundantly praised by the medical world; and, when he took up his pen, his wife became sterile, remained so from 1814 to 1818, and then became pregnant, after the publication of his last work.—Again, the fruitful wife of an half-pay officer or distressed gentleman becomes suddenly barren, and continues so; but no sooner does hope show itself, and prospects brighten, than pregnancy takes place, even to the amount of twins. These facts have occurred under my own observation." (P. 374.)

We would not conclude that a man may, to a certainty, stop the too-rapid increase of his domestic circle by turning author. If such were the fact, the press would groan with the labours of men, who, from the *res angustæ domi*, were induced to contemplate a rising family with anxiety and alarm.

We scarcely know for what class of readers Dr. Dawson's volume is particularly adapted. It is a mere text-book. Almost every subject is dismissed with the "Spartan brevity" which he mentions in his discussion of inflammation of the pleura. He who wishes to meet with a very slight view of the "head and front" of diseases, will be gratified by the perusal of it. As a "Practice of Physic," it appears to us decidedly inferior to others with which our readers are well acquainted. We have more than once had occasion to notice the magisterial and unyielding tone in which Dr. Dawson conveys his opinions: this is the prominent fault of the work. The descriptions of the nature and treatment of disease are, with some exceptions, as correct as they possibly could be, when treated in so superficial a manner. Dr. Dawson has but glided along the surface, either in the enumeration of facts or the discussion of theories.

An Oration, delivered on Thursday, February 9, 1826, *before the Hunterian Society: with Supplementary Observations, and Engravings.* By Sir WILLIAM BLIZARD, Knt. F.R.S.; F.A.S.; F.R.S. ED.; Soc. R. Gotting. Corresp.; Hon. Prof. of the Royal College of Surgeons in London; Surgeon to his Royal Highness the Duke of Gloucester, and to the London Hospital.—4to. pp. 44. T. and G. Underwood, London.

WE look upon the productions of the veterans in our profession as always entitled to our respectful notice. With regard to the "Oration" before us, we are not disposed to enter into any critical analysis of its merits, but shall extract one or two passages, which appear to us of sufficient interest to be laid before our readers.

Physiological errors, it is observed, lead to dangerous consequences, and the following illustrations are given:

"Crimson lines, in absorbent vessels leading to lymphatic glands, are commonly supposed to indicate absorbed virulent matter: whereas, the speaker, from long and steady observation, can aver that the contrary is the general truth.

"If there be, in any mind, doubt on this point, how important that it should be removed; and that opinion in the particular case should rest on universal admission of fact!

"How often have the lives of men, beloved and revered for their virtues and scientific endowment, fallen sacrifices to different, yet equally erroneous hypotheses, relating to expressions of actual, or apprehended, virulence by absorption?

"Let not the speaker be supposed to deny that expression of inflammation of an absorbent vessel may co-exist with the current of a poison in it: rarely, however, does such an expression occur, from the certain absorption of variolous matter, of syphilitic virus, or of the vaccine lymph; but frequently is the sign expressed from a wound by a clean metallic instrument, or from a fragment of undiseased bone.

"What notions are generally entertained of organic alteration of the prostate gland: how frequent the declaration of its schirrous condition! Not any part of the human body may have absolute exemption, by organisation and implanted disposition, from such a distinctive disease. But a long period of anatomical research affords to the recollection of the speaker only one instance of morbid affection of the prostate, which he could properly designate schirrus. The morbid character of schirrus does not admit of favourable alteration; but only to the carcinomatous condition. Other distinctions of induration, and enlargement, of the prostate gland, are within the sphere of curative consideration. How encouraging are such reflections to the persevering exercise of judgment and skill! How consolatory to sufferers, otherwise unsustained by the hope of relief?

"That revered promoter of anatomical and chirurgical knowledge, Cheselden, has somewhere recorded that the divided portions of a fractured patella would not become united by an osseous medium: and this opinion was maintained, at no great distance of time, by the excellent Mr. Warner.

"But a fractured patella will become united by a firm bony production, under the laws of ossification, which direct the process of union of every other divided bone. In every case of fractured bone, union will necessarily have relation; to the sphere of ossifying disposition of the preparative vessels, which in the patella appears to be very limited; to the proximity of the divided portions; and to various other relative circumstances; not to mention chirurgical treatment, as conformably or not to correct notions of muscular action.

"The physiological error, thus gravely sanctioned, would not be important as to the event of union of a fractured patella, whether by a bony or a ligamentous medium, as either would be efficient; but arguments might be maintained, and erroneous conclusions drawn, relating to the general ossifying power of the vessels of the divided parts of bone, from the admission of the error.

"The illustrious Pott has observed, that ligatures on the omentum proved fatal.

"If, in consequence of the excision of omentum in the operation for hernia, a considerable portion of omentum be included in a ligature, the effect upon the colon, stomach, and diaphragm, would be such as fatally to maintain, or to renew, the hernial symptoms.

"Whereas, should ligatures be made on single or detached vessels, the cords be loosely brought out, and the omentum returned in such a manner as freely to expand and float in the abdomen, no evil from the ligatures would ensue." (P. 14.)

With regard to Hydrophobia, Sir William states—

"The speaker, having had many lamentable opportunities of observation on hydrophobia, will attempt to cast a ray of elucidation on the subject.

"The first of the instances of hydrophobia which happened under his notice, long ago, was in a child, who had been bitten in the lip by a rabid dog. The wound healed kindly in a few days, by simple applications; and musk and cinnabar were internally administered by the attendant practitioner.

"The child was too young to have any consciousness of danger, nor had the parents apprehension of any, subsequently to the healing of the wound; until about the twenty-first day, when, the child having past two or three restless nights, the disease became decidedly formed, and soon terminated fatally.

"Assurances have been received of several occurrences of hydrophobia, from bites of rabid animals, in children too young to have been seriously impressed by the influence of the mind, and only sensible of painful feeling in the part affected. Such histories are against the admission, that hydrophobia is the consequence of workings of imagination.

"A young woman, servant to a clergyman at Hoxton, a patient of the late laborious cultivator of natural knowledge, Mr. Parkinson, had been in the practice of feeding and caressing a favourite dog. The animal became, and died, rabid, without her apprehension of its condition. The season was winter, and her hands were much chapped from cold. She had suffered the dog freely to lick her hands; but the creature had not bitten, nor had ever attempted to bite her. Nothing extraordinary occurred in her hands; but, after about three weeks, she was seized with unequivocal symptoms of hydrophobia, and thereupon sent to the London Hospital; where, after ineffectual endeavours for her relief, she died, a victim to her undistinguishing kindness.

"This case surely expresses disease by absorption. There was no painful infliction of wound to justify a supposition that the disease was the consequence of the local impression of a stimulus, *sui generis*, operating upon the nervous system, on the encephalon, and ultimately, with fatal influence, on various organs of the body.

"Writers of unquestionable veracity have asserted that, about the period of the accession of hydrophobia, the wounded part, which had been some time healed and easy, became painful, and manifested signs of irritation.

"The admission of the fact of a local morbid action, preceding or accompanying the symptoms of general influence upon the system, must necessarily incline the mind to a most important conclusion, strengthened by considerations of the analogies of events in the experiments of Hunter, relating to effects on the insertion of variolous matter; and since by remarks in the practice of vaccination.

"On reasoning *a priori*, without practical evidence, excision of the part bitten by a rabid animal would naturally be considered as the process which should be adopted, in prevention of the dreaded evil; and which, at any time before the morbid action has begun in the wounded part, would be performed with probability of success. Positive evidence can be only on the side of inefficacy: but the mass of presumptive evidence of success by the practice of excision, is so considerable as nearly to approach positive weight of argument.

"Towards confirmation of a process thus founded, the speaker can assert that, in the numerous instances of his performance of it at the London Hospital, and on private calls, at various periods from the time of the bite, not a single consequence of hydrophobia has occurred.

"Some surgeons have doubted the efficacy of excision, from their knowledge of its failure. But no person would pronounce this practice as invariably preventive of disease, who has well considered the different circumstances under which excision may be performed,—the divers susceptibilities of the human frame,—the possible varieties in the depth and extent of the wound by the bite,—the not improbable diffusion, far beyond the wounded part, of influence from the saliva of the rabid animal,—and the chance of inattention or unskilfulness in the performance of the operation, as often is illustrated in vaccination." (P. 25.)

An Appendix is given, containing observations on the effects of a stretching force applied to muscle, and on the treatment of a transverse fracture of the patella, which were read to the Hunterian Society on a former occasion. The following is a description of the method of treatment adopted.

"Not any bandage whatever is applied; even little regard is had to position: in most cases, however, the patient is kept lying, with the leg extended.

"Some time since, mention was made to several members of this Society, that there were then two cases in the hospital, under the explained treatment. One case terminated in a firm bony union of the divided parts; the other by a short ligamentous medium. Both patients left the hospital with perfect freedom of motion of the knee-joint.

"Circular bandage, especially if applied during any degree of inflammatory action, is not unfrequently the cause of adhesion and rigidity of the tendinous and surrounding cellular parts, very unfavourable to the motions of the limb.

"A lady received a fracture of the patella, which was treated by bandages; and, after a ligamentous union, adhesions were found to have been formed, and to prevent the motions of the joint. Many months after, she had an accident which separated the united parts of the patella, and loosened the adhesions: she was now treated without any bandage; the parts united, and her surgeon informed the author, a few days ago, that the functions of the joint were restored.

"The violent effort of the extensor muscles to save the body from falling, often occasions a separation of the broken portion of bone to a considerable distance up the thigh; where it would remain, unless removed by external means. But such removal is not in the least degree difficult, after the flurry of the muscular fibres has ceased. Gentle applications of the hand will effectuate the purpose, to the ordinary extent of elongation of the muscles.

"The author's treatment of rupture of the tendon of the extensor muscles of the leg, of the tendo-achilles, and of fracture of the olecranon of the ulna, has long been according to the expressed principle of conduct.

"The learned and highly respected rector of a neighbouring parish, had lately the tendon of the extensor muscles of the leg completely lacerated, in the like manner in which a transverse fracture of the patella happens. Not any bandage was employed: the divided parts became perfectly united, and the use of the limb restored.

"A few months ago a man was admitted into the hospital, on account of the division of the tendo-achilles, by a cutting instrument. The author directed all the bandages which he found applied to be removed; the wound to be dressed superficially, and the patient to be kept at rest in bed. The wound readily healed, and the patient left the hospital with the perfect use of the foot.

"One observation will decisively express the propriety of every rational endeavour to avoid circular bandage in a fracture of the patella. Such description of bandage is known to have impeded union in fractures of the bones of the upper and lower extremities; and must therefore be of injurious tendency, at least, in fractures of the patella." (P. 37.)

Observations on the Artificial Mineral Waters of Dr. Struve, *of Dresden, prepared at Brighton. With Cases.* By W. King, Fellow of the Royal College of Physicians, London; late Fellow of St. Peter's College, Cambridge.—8vo. pp. 53. Highley, London, 1826.

Dr. Struve, having suffered from paralysis of the left thigh and leg, from the injudicious use of prussic acid, repaired to Marienbad, for the purpose of drinking the waters. This he did with the effect of restoring his health; and he was led by this circumstance, and by the favourable opportunity afforded him, to turn his attention to the chemical composition and medical effects of this and other mineral springs in Germany. In the prosecution of these investigations, he seems to have conjectured that it might probably be advantageous to others, and profitable to himself, if he could succeed in imitating these productions. This required much perseverance and no small skill, but the result seems to have been satisfactory; and one of the ends in view, at least, has been accomplished, as pump-rooms were speedily established at Dresden, Leipsic, Berlin, Warsaw, and Koeningsburg, and "many hundreds of invalids have resorted to these institutions, in preference to the natural springs." But it appears that it is not necessary to travel into Germany, as Dr. Struve "has introduced among us one of the greatest blessings which this country has known in the present day."

Such is the opinion which our author does not "hesitate to express" of the benefits resulting from the institution at Brighton for mineral waters, after having had an "opportunity of observing their effects for only one season." Dr. KING is very zealous in the cause, and, if the said institution should not draw together "many hundreds of invalids," it will not be for lack of his commendation. He is decidedly of opinion, however, that they "will not supersede the ordinary labours of the profession," (which, by the by, would be very inconvenient for practitioners residing at watering places;) but, on the other hand, he observes that—

> "They are alterative, and, *in a certain sense*, tonic, for they seem to affect the system in the same way as alteratives do, by a gently purifying influence; and they gradually improve the strength, though not after the direct manner of the ordinary tonic medicines. The tonic effect is evidently the consequence of the alterative; for it is always the later of the two, and does not take place till the various functions of different parts are obviously improved. The alterative power seems to penetrate every organ and texture of the body, and to excite and regulate every secretion; while the tonic power seems to be the result of the restored healthy action of the body, similar to what takes place in a perfectly healthy constitution. In a healthy person, physical or animal power is the result of the general health of the body. So these waters, by their alterative power, restore every part of the body to a healthy state, and the effects of this are animal strength and vigour.

* * *

> "The first perceptible consequences of taking the waters are very slight: they gently promote perspiration, and the flow of urine. These are their mildest effects. Perhaps, a person perceives the action of the bowels to be more regular and free, without being inclined to attribute it entirely to the water; though, upon reflection, he becomes convinced in a few days that it is so. The appetite and spirits improve in the same imperceptible manner; the nights are more composed, and the sleep sounder and more refreshing; then an unusual determination to some part of the body seems to take place, which is described as if all the small vessels of the part were roused from a quiescent languid state, into one of activity: this is accompanied by a sense of fulness and stretching, as if the parts might even give way; and, when the head is thus affected, the sensation is oppressive and painful. These effects

require watching: if they pass on favourably, the disease is gone, the constitution renovated, and restored to vigour, strength, health, and spirits." (P. 8.)

And a general summary of the "remarkable and important" changes which they produce is thus given:

"1. They improve the qualities of the blood.

"2. They alter and improve the structure of the whole body of every part, and of every organ.

"3. They improve the vital powers of each part and organ.

"4. They improve the functions of every part and organ.

"5. The result of all this is, in one word, Health,—the health of every part,—and the health, tone, and vigour of the whole system, both of body and mind. Of this let those speak who have witnessed the effects; let those speak who have tried them. The medical world of London will soon have an opportunity of deciding for themselves, in the result of those cases in which they may prescribe these waters." (P. 13.)

As they do all this, it would be in vain to say any thing against them. The following, however, we can scarcely regard as an example of improvement in the structure of the parts, as stated under the second head; and we rather question whether the subject of the case looked upon it in that light.

"A Prussian general was going through a course of the waters: he had formerly had his arm broken in action, which had been set, and was become perfectly strong. After drinking the waters some little time, he perceived that the fractured part of the limb became tender and loose. The absorbents had evidently taken away the bony deposit by which the union had been formed, owing to the active energies imparted to them by the waters." (P. 19.)

In the body of the pamphlet are contained some desultory remarks upon the operation of medicines, from which we suspect that our author is a disciple of Dr. HANNEMAN's, as he seems to be enamoured of minute doses of medicine; and subjoined are the cases of Dr. Struve and twelve others, very loosely detailed; the majority consisting of hysterical women, who would probably have got well during a trip to the seaside, with any medicine,—or with no medicine; with bread pills,—or with the Carlsbad waters of Brighton.

COLLECTANEA.

Floriferis ut apes in saltibus omnia libant,
Omnia nos, itidem, depascimur aurea dicta.

ANATOMY.

Case in which the Parietal Bones were divided into two, on either side, by a longitudinal Suture.—The cranium appeared to be that of a person between thirty and fifty years of age. The suture dividing the parietals was dentated, and had several ossa wormiana. The mastoid apophyses of the temporal bones were likewise separated from the rest of the bone by a suture. This formation was evidently congenital. (*Zeitschrift für Physiologie.*)

Two new Articulations in the Vertebral Column.—Professor Mayer, of Bonn, has recently published a Memoir, (see the German work above quoted,) in which he has described two new articulations in the spinal columns of adults, who have possessed great freedom of motion in the back. The first of these is found between the spinous apophyses of the lumbar vertebræ. The inferior border of the spine of one vertebra unites by a small articular condyle with a corresponding facette, or articular cavity, on the upper border of the spinous process next in succession. The author calls this joint the interspinous diarthrosis of the lumbar vertebræ. It is said to be most distinct between the third and fourth of these, in which situation a distinct synovial capsule is stated to exist.

The second articulation, less common than the preceding, is formed from the ninth dorsal to the second lumbar vertebræ. It is constituted by two facettes and two articular condyles, at each of the above-mentioned vertebræ. The facettes are situated beneath and within the superior oblique apophyses at the upper border of the root of the spinous processes; the condyles are placed at the corresponding part of the inferior surface of the vertebra. M. Mayer calls this the oblique accessory diarthrosis; the facettes, the accessory glenoid cavities; and the articular condyles, the oblique accessory apophyses. (*Ibid.*)

PHYSIOLOGY.

On the Luminousness observed in the Eyes of various Animals.—The following observations are from a paper by Dr. Charles L. Esser, in Professor Jameson's Journal for January.*

Appearances of light, as is well known, are not uncommon in inferior animals, and the number of luminous animals in the sea are so great, that large tracts of the water's surface have been seen to be illuminated by them.

This phenomenon, however, is comparatively seldom observed in fishes, and the more rarely the higher we ascend in the scale of the animal kingdom, if, under the denomination of luminousness, we understand the real evolution of light, and do not consider it as the reflection of the incident rays of light; for, in this latter case, the luminous appearance does not inhere in the animal body itself, but is in reality merely a reflection, which is totally different from the evolution of light in the inferior animals. A real phosphorescence is sometimes observed in the higher animals, and even in human beings, particularly in their excrementitious fluids. The light of the eggs of the lizard, the luminousness of the perspired matter in man and animals, the irradiation of light in cats and other animals, from the stroking of their hair,—and, finally, the phosphorescent quality of human urine, have been frequently observed.

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* Translated from Karsten's Archiv. b. viii. heft iv.

On most of these various kinds of light, I have neither performed experiments myself, nor have I collected the facts of others; the present memoir being chiefly devoted to an examination of the light or luminousness of the eyes in human beings and inferior animals.

The more perfectly to accomplish this object, I some years ago performed a series of experiments, that led to an important result.

Having brought a cat into a room half darkened, I observed that the eyes of the animal, when opposite the window, and in a certain direction to myself, sparkled very brilliantly; which phenomenon suddenly vanished, when I, either by the motion of my head, changed the direction of my eyes to those of the cat, or the animal, by moving its eyes to and fro, brought them into a different position. In a situation wherein I could best observe the eyes of my cat, I caused the room to be slowly darkened, by gradually closing the window-shutters. The light of its eyes became weaker, and vanished entirely as soon as the room, on the place where the cat was situated, became absolutely dark. Incident rays of light were always necessary to produce the luminousness of the eyes.

I wrapped another cat in a cloth, but left the head uncovered, whereby I was able to handle the animal as I had a mind, and place it in any situation I chose. In this cat what I have just stated was confirmed. I placed it in such a position that its head, at the distance of a few steps, was directed towards the window, by which means I could lighten or darken the room at pleasure. I now permitted a few rays of light to fall through the window into the room, in such a manner that the place where the cat was present was illuminated; and I placed myself in such a direction towards the window, that my eyes were in a straight line with those of the animal, so that I saw the light of its eyes very distinctly; which light, as in the former experiment, suddenly vanished when I turned my head, or the cat turned its eyes. At the moment when my eyes were directed in the manner just mentioned, I observed a most beautiful green light; but, when they were out of this direction, the cat's eyes had their usual appearance. By the turning of my head, or by any other arrangement I chose, by which I intercepted the incident rays, I could at pleasure cause sometimes the one eye of the cat, sometimes the other, and sometimes both together, to shine. If I intercepted the incident rays of light from the left half of the head, the right eye became luminous, and conversely. In these experiments, I observed quite distinctly that the light of my cat's eye emanated from the pupil, the eye itself being lightened only in proportion to the dilatation of that part of it. By suddenly admitting a strong glare of light into the room, I produced a contraction of the pupil; and, when I suddenly rendered the room somewhat dark, a small round luminous point first appeared in the eye, and that point enlarged according as the pupil was dilated. The pupil of the eye of these animals being thus dilated in imperfect darkness, so that the iris seems to encircle the pupil as a small ring, and the sclerotic in cats being scarcely visible, may be the reason why it is believed that the whole eye of the cat is luminous, although its light is, nevertheless, only in proportion to the dilatation of the pupil.

The dilatation of the pupil in twilight is, however, not the only cause of the light of the eyes; but the light surrounding the animal being fainter, also assists us in perceiving with greater distinctness the light as it is more vividly reflected from their eyes; for, if we suddenly illuminate a chamber in which there is a cat, there remains nothing but a luminous brightness where there was formerly a beautiful yellowish green light.

The light of my cat's eyes appeared to be more vivid when she opened them wide from apprehension, or looked around her attentively; whence Treviranus observed, that the eyes of cats sparkled most when the animals were in a lurking position, or in a state of irritation. That author says—

"The light of the cat's eyes appears most conspicuous when she is in a lurking position,—when she is attracted by any unusual appearance,—or when irritated. In the first two instances, the light is faint and dull: in the last instances, it darts forth in intermitting scintillations, and at those movements when the light is most vivid, there are accompanying movements of the eyes." That the light of the eyes of animals appears brighter in a state of irritation than in a state of quiescence, seems to originate in this, that the eyes of all animals, as well as those of man, appear brighter in violent rage, and sparkle more, than in a quiescent state. This, in man, seems to arise from an increased secretion of the lachrymal fluid on the surface of the eye, by which fluid the light of the eye is undoubtedly rendered more brilliant. Treviranus further observes, "The eyes of the cat shine also where no rays of light penetrate, and the light must in many, if not all, cases proceed from the eye itself." Before performing the above experiments, I entertained the same opinion with Treviranus, and made many fruitless experiments with cats in the dark, before I abandoned the position. The light must be brighter in proportion to the darkness of the place where the cat is. I soon renounced this opinion, when, in all the experiments I made on cats in places absolutely dark, I did not discover the slightest trace of light in the eyes of these animals, let me irritate them as I could.

* * *

Besides cats, many domestic, as well as other animals, are furnished with luminous eyes.

Under similar circumstances as above, I observed that the light of a dog's eye, as was the case in my experiments on cats, vanished suddenly as soon as I had completely darkened the room where the dog was. I observed the eyes of another dog sparkle when he was irritated, and in the corner of a room that was faintly lighted. The eyes of the animal protruded very much, glittered brilliantly, and the pupils were dilated to an unusual degree. The colour of the light, which was commonly yellow, changed more or less as the rays of light fell on the eyes of the animal, and exhibited the following appearances:—When a small body of rays of light fell on the eye, the light was of a fiery redness, and sometimes so strong that, after I looked a long time attentively at it, my own eyes experienced a disagreeable sensation. When there was a great body of rays, the light was green or yellow, sometimes bluish. In respect to this change in the colour of the light, I was inclined to think that it might be owing as much to the motions of the animal's eyes as to the body of light that fell upon them. This change was different in different dogs, and in some it was not at all observable. Further, the eyes of every dog placed in the same situation shone, but the intensity of the light varied with the individuals.

I have observed luminousness in the eyes of horses, sheep, and hares, which was different, however, in colour and strength.

Many appearances of light have been observed in the eyes of human beings. Treviranus mentions that G. T. L. Sachs, and his sister, both belonging to Albinoes, had phosphorescent eyes. Late in the evening there appeared in them a lively yellowish brightness, which darted forth in fiery coruscations or globules from the interior of the eyes. The balls rolled hither and thither, and frequently ejected rays at least an inch in length. In these two relatives the light was liveliest and strongest after their birth, and during infancy; in their more advanced years, the light was strongest when they were in deep meditation: at this time also the oscillation, which they had in common with other Albinoes, was liveliest.

A rather remarkable observation, and similar to the case of the Sachs, is that of Michaelis, who, many years before his death, during the interval between day and night, and during the night itself, observed irradiations of light issuing from his eyes,—sometimes so strong that he could read the smallest print. (SCHLICHTEGROLL's Necrolog, des 19 Jahrhunderts, B. 3. s. 337.)

In a boy, who belonged to the Albino variety, I observed a similar case; though not accompanied with irradiation. In this boy, who suffered so much from the dread of light that he never ventured abroad except in twilight, I frequently observed the same fiery eyes; yet were they very different, both in the strength and colour of their light, from the luminous eyes of animals which I had observed, partly from design and partly from accident, for this boy's eyes might be called glassy rather than luminous. Some years ago I was assured, by Hr^{n} Geheimenrath W., that his sister had often observed the eyes of her children, who were also Albinoes, to be luminous.—These last two cases could be traced to rays of light falling on the eyes.

It now remained for me to search out the cause which, by means of the incident rays of light, gave rise to the shining appearance in the eyes of human beings and inferior animals. This explanation seemed to me no easy matter, yet, from the beginning, I expected to be able to search out the cause of this phenomenon in a reflection of rays of light penetrating into the eye. The colour of the light, however, and particularly its changes in dogs, appeared to me very difficult to explain, and to be rather at variance with my own opinion.

To discover the cause of the shining in the eyes of human beings and inferior animals, I came to the resolution of undertaking the extraction of the lens on a cat, from which I anticipated the best result, in so far as I might, by that means, best determine to what extent the remoter parts of the eye contributed to its luminousness.

I attempted to perform the above operation on a cat, but the utter restlessness of the animal rendered it extremely difficult,—indeed, almost impossible. Having ascertained that eyes of cats shine after death, I resolved to kill the cat, that I might have it in my power to dissect any part of the eye I thought proper.

First, by means of a pair of scissors, I cut away the whole of the cornea, and completely destroyed the anterior chamber of the eye. I now observed that the light of the eye was not in the least diminished, but somewhat weakened in regard to colour, which was changed from a yellow to a pale green. I then took away the iris, that lay exposed before me, without injuring the conformity of the hinder part of the eye, to discover whether the iris, as Treviranus maintained, really contributed to the light. This, however, was not the case; for the light still continued. The taking away of the lens was followed by a different result, which considerably weakened the intensity of the light, and the greenness of its colour. It now struck me that the tapetum in the hinder part of the eye must form a spot, which caused the reflection of the incident rays of light, and thus produced the shining. This was the more probable, as the light of the eye now seemed to emanate from a single spot. After taking away the vitreous humour, I observed that, in reality, the entire want of the pigment in the hinder part of the choroid coat, where the optic nerve enters, formed a greenish silver-coloured changeable oblong spot, which was not symmetrical, but surrounded the optic nerve in such a manner that the greater part was above, and only a small part below it; and therefore the greater part lay beyond the axis of vision. It is this spot, therefore, that produces the reflection of the incident rays of light, and, beyond all doubt, according to its tint, contributes to the different colouring of the light; to which, nevertheless, the remaining parts of the eye, when conjoined, seems to be no less necessary.

Time required by different Substances to manifest their Presence in the Urine.—Some curious experiments have recently been made by M. G. A. Stebberger, with a view of ascertaining the periods which intervened between the introduction of different substances into the body, and their being detected in the urine.

A young man was affected with a congenital prolapsus of the bladder. This malformation presented a red fungous excrescence at the lower part of the abdomen, which was always moist, and very sensible to the touch. The urine constantly oozed from the orifices of the ureters, which might be seen, by which the fluid might be collected in the state it was secreted by the kidneys. When the urine was examined in its natural state, and while the young man fasted, it was found to be of a deep yellow colour, with a nauseous odour and salt taste: it converted into blue tournsol paper, which had been reddened by an acid. A certain quantity of it was always collected in the first instance before beginning an experiment, and this was compared with what was secreted during the continuance of the operation. When any substance was exhibited, the urine was collected every ten minutes, till the presence of the matter in question was perceived. Intervals of a quarter of an hour, or half an hour, were then interposed until the urine had regained its natural state. In this way the progressive increase and diminution of the quantity of foreign matter in the secretion was readily observed.

1. The following substances, introduced by the mouth, *were* detected in the urine:—The colouring matter of rhubarb, that of black cherries, that of madder, of logwood, of indigo, of the pulp of the cassia, gallic acid, the tannin of uva ursi, hydrocyanates of potass and of iron, and one of the constituents of elder; which last gave to the urine a deep yellow colour.

2. The following matters, when introduced by the mouth, *were not* detected in the urine:—Tincture of tournsol, (according to the experiments of TIEDEMANN and GMELIN, this matter is destroyed in the alimentary canal,) the bitter principle of quassia, the tincture of iron, and the acetate of iron.

3. Substances employed in the form of baths and fomentations, or embrocations, were not perceived in the urine, with the exception of oil of turpentine and acetate of potass: the former, indeed, is well known to communicate a violet odour to the urine by simply inhaling the vapour. The other substances tried were infusion and tincture of rhubarb, decoction of logwood, and a solution of gallic acid. (*Zeitschrift für Physiologie.*)

PATHOLOGY.

Successful Inoculation of the Measles, from the Edinburgh Med. and Surg. Journal, January.)—

This inoculation, which was performed with success by Home and Horst, and recommended by Vogel, Percival, Brown, Monro, and Tissot, but was afterwards condemned by Cullen, Girtanner, Rosenstein, Vaidy, and Montfalcon, was again employed with advantage by Professor SPERANZA, in an epidemic which prevailed in the territory of Mantua in 1822. Six boys in the House of Industry, and afterwards he himself, were inoculated with the most evident effect in propagating the disease, which in all followed a mild and regular course. A repetition of the experiment, by himself and others, had the same fortunate issue. The inoculations were performed in the following manner:—A slight cut was made into one of the most vivid of the large spots with a lancet, the point of which was covered with the blood effused. With this some small incised punctures were made on the arm, and a proper bandage applied. The phenomena of inoculation commonly appeared in a few days. (*Bibliotheca Italiana.*)

PRACTICAL MEDICINE.

Cases of Nervous Irritation, exhibiting the Efficacy of Cold as a Remedy. By S. JACKSON.—

If any diseases may be considered as distinct from all others, with respect to their essential character, they are cramps, convulsions, &c., vaguely classed, in the common nosological systems, with the designation of neuroses. On the principles of the physiological medicine, they are diseases of irritation, of the same general character as other diseases of irritation, and receive their peculiar character, or the phenomena they present, solely from their location in the nervous system. Their treatment is to be directed on the same principles as other diseases of sur-irritation, —that is, by direct debilitants addressed to the primary seat of the irritation, or by revulsives.

The irritation that occasions nervous phenomena may be entirely confined to the nervous fibrils of an organ, in which it commences, and from which it is transmitted to the brain, and thence reflected into the voluntary muscles and other tissues; or it may be complicated with sanguine vascular irritation of the same organ. These circumstances impart a difference to the phenomena attendant on it, and the method of treatment. In the first case, it commonly yields without difficulty to the diffusible stimuli, to narcotics, antispasmodics, and revulsion practised on the exterior. In the last, those remedies are of less assured efficacy, not unfrequently fail entirely to subdue the affection, and sometimes aggravate it. The agents that debilitate the organic actions, that allay irritation, applied directly to the organ where it is seated, in conjunction with revulsives, are the means indicated; and, simple as they may seem, are attended with most prompt and decidedly beneficial effects. The following cases belong to this last class, and are well-marked examples of the morbid condition I have alluded to, as well as of the treatment I consider most appropriate to it.

CASE I.—July 23, 1825.—The heat had been excessive for several days; thermometer ranging from 90° to 98° F. I was called to a man supposed to be suffering from having drunk cold water. The subject was about thirty-five years of age, fair complexion, stout built, and nervoso-sanguine temperament. He was an Irishman by birth, and a weaver by profession. He had worked steadily during the day at his loom, in a confined and very warm room; had been very thirsty, and drunk largely of spirits and water, but not sufficient to intoxicate him. In the evening, he walked out, after eating heartily, and on his return was suddenly seized with giddiness, and inability to stand. He was carried home, and, from a supposition that his disorder had been induced by cold water, spirits and laudanum were given to him. The symptoms were immediately aggravated, and, in a few moments after, were followed by violent spasmodic and convulsive efforts.

In this state I saw him. It was with difficulty four or five athletic men could retain him on a bed. The face was flushed, distorted with an expression of anguish; the eyes fiery. The convulsive throes came on in paroxysms, which lasted five to six minutes, and with short intervals; in the intervals, jactitation, tossing of the arms, cries of anguish; pulse was frequent, full, and oppressed; skin hot; profuse sweat covered the face and neck; epigastrium exceedingly sensitive, pressure on it raised loud complaints, and renewed the convulsive exertions; thirst intense. Consciousness was perfect, but the mind, concentrated on the sufferings experienced, could not be brought to attend to any inquiries addressed to the patient.

The diagnosis formed of the case was—vascular and nervous irritation of the stomach; the predisposition to gastric irritation, derived from the extreme heat; the irritation itself excited by the use of ardent spirits during the day, and meal in the evening, suddenly aggravated by the spirits and laudanum, administered as remedies; excitement of the general vascular system, and irritation of the portion of the cerebral structure presiding over the voluntary movements, transmitted sympathetical from the stomach.

The treatment was directed by this view. A tub of cold water from a well-pump was ordered, and a vein opened. While the blood was flowing, a stream of cold water was directed to the head, and cold water given in small draughts. At the commencement of the treatment, a convulsive paroxysm came on: it soon ceased, and proved to be the last. Twenty ounces of blood subdued the vascular excitement. The cold drinks and affusion were in the highest degree grateful, and called forth, from the patient, the most extravagant expressions of the relief they afforded him. He now informed me that the head and stomach were the seats of the anguish he experienced, and that, although he had been conscious of what he was doing, he could not control or restrain the violence of his muscular exertions.

Cloths dipped in cold water were applied to the epigastrium; iced gum water, acidulated with lemon-juice, was directed to be given during the night; and a domestic clyster to open the bowels.

July 24.—No return of convulsion; violent pain in stomach and bowels, attended with copious discharge of blood; pulse full and tense.—V.S. ℥ xij. Injection of cold water. Sal Rochelle ʒj. dissolved in a pint of water, wine-glassful every hour. Continue gum water.

July 25.—Pain removed; discharge of blood per anum ceased after the first injection of cold water; skin soft and cool; pulse natural; tongue furred.—Continue gum water.

July 26.—Convalescent.

Case II.—January 3, 1826.—Called to see a man in the employ of a livery-stable keeper, as an hostler; age, twenty-five; fair complexion, light hair and eyes; slight figure; a Swiss by birth; sanguine nervous temperament.

In the evening, immediately after having eaten supper, he had been seized with great distress, attended with violent convulsive efforts. I found him on the floor, struggling with several persons, who held him down. He uttered cries of anguish, seemed in great torture, was perfectly conscious, but could not express his feelings. When interrogated, he pointed to his stomach as the seat of pain; the tongue scarlet red on the edges, and furred; the skin was cool, and pulse feeble. I was informed by his employer, an Irishman, that he had been very thirsty for several days, and had drunk large quantities of cold water, to which he attributed the present condition of the patient; and was very pressing with him to drink some whiskey, but which was rejected with an expression of horror. I also learnt he had dined that day on salt pork and cabbage.

* * *

To a pitcher of cold pump water was added four ounces of sugar, and the patient was directed to drink of it, in small quantities, every few minutes. It was swallowed with the greatest avidity, and, had he been permitted, would have gorged himself with it immediately. Relief was almost instantaneous after the first draughts. The convulsive efforts ceased; the patient sat up, and could describe his sensations: he felt as if fire was in his stomach. A pediluvium was ordered, with warm fomentations to the abdomen, frictions to the extremities, and an injection into the rectum. On my return in half an hour, all the accidents were dissipated; the patient was sitting up, and in comparative ease. He had finished his pitcher of drink, and had commenced upon another. Vascular excitement had come on; ten ounces of blood were drawn; the cold drink continued. Next morning, the patient was attending to his duties; and a regimen for a few days entirely restored the stomach to a healthy condition.

The following case is related by Dr. La Roche.

Mrs. F—, about thirty years of age, of a sanguine and nervous temperament, was attacked about four years ago, whilst residing in the State of Alabama, with a violent pain in the epigastric region, attended with vomiting. It occurred soon after dinner, and was probably caused by something she had eaten. No physician being at hand, her husband gave her tea-spoonful doses of laudanum and chamomile tea; which, however, were ejected from the stomach with considerable efforts, and an aggravation of the symptoms. The gastric irritation and pain soon became so violent as to occasion severe convulsive movements in almost every muscle of her body, and to deprive her of her senses for more than six hours. From this very severe attack she, however, recovered, more by chance and through the efforts of her good constitution, than from the effects of medicine. Since that period she has continued subject to this complaint. The attacks are more or less severe, are brought on by the slightest irregularities in regimen, and are in general with difficulty removed.

At two o'clock on the morning of the 23d of April last, she was once more attacked with this painful complaint, and suffered severely until eight o'clock, when I was requested to visit her. I learned from her friends that she had been slightly indisposed for a few days, and had eaten the preceding evening a small portion of lobster. This, together with the greater part of what she had eaten during the day, had been ejected from the stomach a short time previous to my visit. I was also informed that she had taken twenty drops of laudanum, warm teas, and that warm flannels had been applied to the region of the stomach. Her pain was now hardly to be endured; the muscles of her upper extremities, as well as of her neck and face, were spasmodically contracted; her skin was covered with cold perspiration; and her pulse, in the short intervals of the convulsions, was found to be greatly accelerated. Judging, from the severity of these symptoms, that no time was to be lost, and influenced by former prejudices, I immediately directed forty drops of laudanum to be administered in combination with a little of the essence of peppermint, (Mrs. F— never taking laudanum without it,) and a perseverance in the warm tea, &c. A short time after the exhibition of the laudanum, the pain was aggravated, but was soon a little relieved, in consequence of vomiting supervening. Another dose was soon administered, which again occasioned an increase of the symptoms, and brought on vomiting, by which the stomach was completely cleared. A mustard poultice was ordered to be applied to the epigastric region; but, as it required some time to be prepared, I judged it adviseable to resort, in the mean time, to something, to lessen, if possible, the sufferings of the patient. As laudanum, and other remedies usually applied in such cases, instead of abating, seemed to aggravate the pain, I determined to give a trial to cold water, as prescribed in nearly similar cases by my friend Dr. Jackson, of this city. A tumblerful of very cold spring water was in consequence procured, one-half of which the patient was requested to take immediately. In less than three minutes, some relief was obtained. An equal quantity of the water was given with a still greater, and indeed a remarkable, mitigation of the pain.

The poultice was now applied, and was about ten minutes before producing an inflammation in the skin. During the time, however, Mrs. F— had drunk a second tumbler of the water, had slept a few minutes, remained free from spasms in the muscles, and felt completely relieved from the pain. The poultice was taken off about fifteen minutes after its application, and the patient directed to drink frequently through the day of water sweetened with orange-flower syrup. In the afternoon, she experienced some slight spasmodic pains in the stomach, in consequence of eating some thin sago, but found relief in a draught of her water. The tongue, however, remained red and somewhat parched; the pulse was quick; skin a little hot; the head painful, and the thirst considerable. The water was directed to be continued, and an emollient injection ordered, in order to relieve a sense of weight and uneasiness in the bowels. The next day, I was very happy to find that all signs of gastric irritation had subsided. The bowels being costive, and the tongue a little foul, but pale, a dose of Epsom salts and calcined magnesia was prescribed, and served to remove every vestige of the complaint. With the exception of the irritation caused by the mustard, Mrs. F— was immediately restored to perfect health.

(*North American Medical and Surgical Journal.*)

MATERIA MEDICA.

On the Diuretic Properties of the Equisetum, (from the Edinburgh Med. and Surg. Journal, January.)—

The various species of the Equisetum have been recommended by Professor LENHOSSEK, of Vienna, as a very powerful and specific diuretic, which neither oppresses the digestive organs, nor induces any bad consequences in the vascular or nervous systems, and is therefore preferable to squill, digitalis, colchicum, and other diuretic remedies, whose unpleasant consequences are too well known. It is particularly serviceable in serous accumulations from debility, or after exanthematic fevers, and is contraindicated in inflammatory states of the system. All the species of Equisetum possess a directly diuretic virtue: the Arvense, Variegatum, Ramosum, and Palustra, act more mildly; but the Hyemale and Limosum act more powerfully, and are more apt to induce bloody urine. The dry plant is also preferable to the recent, which is more active. It has been sometimes given in powder, but the decoction answers well in every case, as it is not offensive either in smell or taste, and children take it readily when sweetened. Two or three drachms of the dried herb are to be boiled in a pint of spring or river water for a quarter of an hour, and of the decoction a spoonful or two may be given to children, according to their age, and adults may take half a cupful, or a whole cupful, every two hours, until the flow of urine be increased. (*Beobachtungen und Adhandlungen von Oesterreicheschen Aerzten,* vol. v.)

INTELLIGENCE.

MONTHLY REPORT OF PREVALENT DISEASES.

The only object we have in view in these Reports is to give an idea of those diseases which are most prevalent. During the past month, however, nothing has occurred which appears worthy of being recorded, except that the fever mentioned on former occasions seems decidedly to have decreased. We are not aware that there exists at present any disease which is especially entitled to be called prevalent, beyond the catarrhal affections and rheumatism which always abound at this season.

January 25*th.*

BILLS OF MORTALITY FOR 1826.

DISEASES.

Abscess	76
Age, and Debility	1575
Apoplexy	363
Asthma	922
Bedridden	1
Bile	14
Cancer	100
Childbirth	209
Consumption	5290
Contraction of the Heart	2
Convulsions	2588
Croup	90
Diarrhœa	12
Dropsy	820
Dropsy on the Brain	676
Dropsy on the Chest	65
Dysentery	7
Enlargement of the Heart	16
Epilepsy	40
Eruptive Diseases	12
Erysipelas	17
Fever	926
Fever, Typhus	97
Fever, Intermittent, or Ague	2
Flux	8
Gout	38
Hemorrhage	34
Hernia	28
Hooping Cough	674
Hydrophobia	4
Inflammation	2295
Inflammation of the Liver	119
Insanity	170
Jaundice	33
Jaw-locked	1
Measles	774
Miscarriage	3
Mortification	244
Ossification of the Heart	6
Palpitation of the Heart	6
Palsy	22
Paralytic	125
Pleurisy	13
Rheumatism	12
Scrofula	10
Small-Pox	503
Sore Throat, or Quinsey	13
Spasm	44
Stillborn	733
Stone	21
Stoppage in the Stomach	20
Suddenly	110
Teething	309
Thrush	65
Tumor	8
Venereal	8
Worms	1
Total of Diseases	20374

CASUALTIES.

Burnt	28
Choked	1
Drowned	139
Excessive Drinking	7
Executed	2
Found dead	9
Fractured	2
Frighted	1
Killed by Falls and several other accidents	112
Murdered	4
Poisoned	8
Scalded	2
Shot	1
Smothered	1
Starved	2
Suffocated	8
Suicides	57
Total of Casualties	384

Christened····Males, 11,178—Females, 11,066—In all, 22,244.
Buried ······Males, 10,454—Females, 10,304—In all, 20,758:

Whereof have died—

Under Two Years of Age	5952	Sixty and Seventy	1832
Between Two and Five	1982	Seventy and Eighty	1569
Five and Ten	768	Eighty and Ninety	634
Ten and Twenty	808	Ninety and a Hundred	90
Twenty and Thirty	1472	A Hundred	1
Thirty and Forty	1724	A Hundred and Three	3
Forty and Fifty	1994	A Hundred and Five	3
Fifty and Sixty	1926		

Decreased in the Burials this year, 268.

☞ There have been executed within the Bills of Mortality, 19; of which number only 2 have been reported as such.

Case of Uterine Hemorrhage, successfully treated by the Operation of Transfusion.

By Burton Brown, Esq.

Mrs. ——, ætatis thirty, was delivered of her tenth child, on the 31st December, at a quarter before one P.M. This lady had, in all her preceding labours, suffered much from uterine hemorrhage; she was of a lax and delicate habit, and hysterical in the highest degree. Soon after the birth of the child, an alarming flooding occurred: the hand was immediately introduced into the uterus, for the purpose of exciting contraction; which effect was almost instantly produced, the womb expelling both the hand and placenta into the vagina, and from this period the hemorrhage ceased. Although I have seen much of flooding, yet the symptoms of collapse were such in the present instance as to produce in my mind a considerable degree of anxiety and alarm. I administered from time to time small portions of pure brandy, amounting in the whole to eight or ten ounces; in addition to which she took a draught composed of Ether and Camphor Mixture. It should perhaps be stated, that, in addition to the introduction of the hand within the uterine cavity, cold was extensively applied to the abdomen, and the head was lowered. The uterus continued very firmly contracted, except at intervals, when there was a slight relaxation for a few seconds,—not, however, sufficient to allow of the escape of any blood from the uterine vessels. The patient had three smart convulsive fits, each followed by a very alarming collapse. As she appeared to have slightly rallied in consequence of the brandy and ether, I contented myself for a short time with watching her very closely.

She now vomited, and, as frequently happens in these cases, appeared to be a little roused by it; but her pulse soon flagged again, the breathing became irregular and weaker, and from this time the powers of deglutition were lost. She became now perfectly insensible; the head was thrown back, the eyelids closed, and the pupils fully dilated. The pulsation of the carotid artery was just perceptible, and the radial artery imparted to the finger only a diffused tremor.

I at this period requested the assistance of Dr. Blundell, who was from home, as was also Mr. Doubleday.* Mr. Waller, of Aldersgate-street, was now sent for, and arrived about half-past two, (an hour and three-quarters after the birth of the child,) when the patient was in the following state:—She was lying on her back, with a most death-like expression of countenance; her extremities were of a marble coldness, and there was but little warmth on her chest or abdomen. She had, in a most remarkable degree, the high respiration, which was accompanied with a good deal of stertor. The eyelids were closed, and the eyes perfectly insensible to light; pupils fully dilated. The jaw was dropped. The pulse at the wrist was not to be felt; nor could Mr. W. distinguish the beat of the carotid. It was my firm conviction at this period that she would not survive long enough to have the operation of transfusion performed, though, after a deliberate consultation upon the case, we determined to make the attempt, not considering ourselves justified in omitting it, even under the present discouraging circumstances. The operation was proceeded in after the usual manner.

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* This gentlemen arrived, however, at the termination of the second injection.

Twenty-five minutes before three o'clock, (two hours and ten minutes after the birth of the child,) thirteen drachms of blood were injected through the median vein, in a direction towards the heart, by means of a syringe; the blood remaining out of the living body, on the whole, about a minute and a half. No particular change seemed to be produced by this first supply of blood, which was injected with the greatest ease, and no unpleasant symptoms followed it. Care was of course taken to prevent the admission of air, and the blood was thrown in very slowly.

Five minutes having elapsed, the injection of thirteen drachms was repeated, in the same slow and cautious manner; and now the action of the radial artery became decidedly improved: it was no longer a mere tremulous flutter, but a distinct pulsation. The respiration soon became more free. The pupil was still exceedingly dilated, and no signs of sensibility were manifest; the palpebræ were of a mottled hue, and the countenance extremely pallid.

Ten minutes having elapsed from the second injection, the operation was repeated, and the improvement was now more evident, (the aggregate quantity injected amounting to about five ounces.) The pulse was 120, and regular. Mr. Doubleday informed me that, at the time of the third injection, he separated the palpebræ, and passed the point of his finger several times before the cornea, but no sensibility was manifested, either by motion of the globe or contraction of the iris. She, however, moved her extremities, and exclaimed "Oh!" The countenance was less pale; she sighed deeply, and breathed with a more expanded thorax. About three tea-spoonfuls of brandy were now given her, mixed with a little water, which she swallowed with tolerable ease, being put into her mouth by a spoon.

It was not, however, till after the fourth injection that the amelioration was most conspicuous. Now the pupil contracted readily upon the admission of light; she moved her extremities frequently, and with considerable power; the chest was fully expanded at each inspiration; pulse 120, equable, and moderately forcible. She appeared to have much pain or uneasiness in her left side, evinced by some restlessness, by putting her hand to her side, and inclining the trunk laterally, as though she would shrink from herself; the corrugatores supercilii forcibly contracted. These indications of the existence of pain were particularly observable when pressure was made on the uterine region. The cheeks became reddened during the contraction of the facial muscles while in pain, and the lips, from the powerful action of the orbicularis cris, were quite florid.—Were these the effect of after-pains? I think she recognised her husband when he spoke to her, and she grasped my hand as though she knew me.

It was now evident that the threatening symptoms were subdued, but it became a question whether another injection would not tend to alleviate the unpleasant symptoms which so often follow uterine hemorrhage, even when patients eventually go well; and consequently a fifth was attempted, but, owing to the patient's getting a little restless, and some other cross incidents, it was abandoned. When the pressure was removed from the lower part of the vein which had been opened, the blood issued in a small jet; thus proving, beyond controversy, the complete restoration of the circulation.

She now directed her eyes towards surrounding objects, and attempted to adjust her dress. An hour and ten minutes after the first injection, she noticed all around her; she appeared soothed by the attention of her nurse, and spoke to me with a firm, distinct voice, desiring that I would not leave her. She appeared to have much nervous irritation, or hysterical mobility; to alleviate which, fifty drops of Tinct. Opii were given. At a quarter to four, she turned upon her side: this was three hours and a half after the birth of the child.

Half-past six.—Has had no sleep. Great uneasiness and heat of the head. She had taken toast and water, and diluted milk. An evaporating lotion was directed to be frequently applied to the head, and a draught composed of Liq. Am. Acet. and Mist. Camph., with twenty minims of Tr. Hyoscyam. to be taken every six hours.

January 1st, ten P.M.—Had taken light nourishment, such as egg beat up with milk. Half an ounce of Castor-oil was given early in the morning, which produced a copious evacuation. In the evening, she complained of intense pain in the head. Pulse equable, and moderately firm; much heat in the head and temples; skin and extremities ordinarily warm. Diet during the day has been chiefly milk, and the yolk of one egg. Respiration free and easy; sensibility perfect; in short, the headache was the only bad symptom.

2d, morning.—The Castor-oil was repeated, which again produced a plentiful evacuation. The pulse 100, strong and bounding; the surface of the body hot, but the heat and pain in the head somewhat diminished. Some interrupted sleep was obtained during the night. The mind remains collected and tranquil.

Afternoon.—Complains of acute pain in the forehead, principally over the left eye, extending down the side of the face, with occasional confusion. In the evening, the pain was less, and its occurrence not so frequent; temperature of the head lessened, and also that of the skin; pulse 100, equable and compressible.

3d, morning.—Passed a restless night; sleep disturbed; considerable pain in the head, with increased temperature; was constantly corrugating the skin of the forehead and eye-brows; had resisted the application of the lotion during the night. Complains of pain in the bowels, for which warm flannels were applied with benefit; and had passed three small, lax motions. Tongue cleaner, moist, and rather pale-looking; pulse 100, and strong.—To have six leeches applied to the temples.

Eight P.M.—Leeches bled well. Pain at the head less; heat reduced; tongue free from the creamy crust with which it was covered last evening, and this morning moist and looks pale; temperature of the skin natural; pulse 100, soft and compressible. The arm was dressed the first time; looked well; not any tenderness, or indication of inflammation along the course of the vein.—To take thirty drops of laudanum in one of the draughts at bed-time.

4th, ten A.M.—Was quieted by the opiate, though the sleep was disturbed. Pain in the head less severe, and not so frequent in its attacks. Her hair has been removed, from which she has found benefit. Lotion pleasant to the feel. Pulse 106, and soft; skin generally temperate; lochial discharge in sufficient quantity. Not any indication of lacteal secretion. To take ℥ ss. of Ol. Ricini, not having had stools since yesterday morning. Tongue coated with a brownish crust. Has taken a pint of milk in the twenty-four hours, besides the yolk of one egg, in addition to other diluents.

Nine P.M.—Had four stools. Tongue as morning; skin temperate; complains of cold generally; recurrence of pain in the head not so frequent.—To take the opiate draught at bed-time.

5th, ten A.M.—Had a restless night from hysterical affection; violent fits of crying; did not sleep till six in the morning. Pain in the head less; tongue coated as before; pulse 106, and soft; moist skin, not much above natural temperature.—Ordered the draughts to be continued, with the addition of twenty minims of Spirit. Æther. to each.

Evening.—Has complained of cold, and also pain in the right hip, extending down the outer side of the thigh; is very hysterical. Lochial discharge of good quality, and rather copious. Pulse eighty; tongue the same; skin temperate.—To take the opiate at night, and a Rhubarb draught in the morning.

6th, A.M.—Passed a restless night, apparently more from hysterical affection than any other cause. Other symptoms the same as last evening.—The Rhubarb draught ordered to be repeated, the first not having answered.

Evening.—Pulse seventy; tongue looking moist, and nearly free from crust; skin temperature; complained of pain extending from the spine of the ileum down the inner part of the right thigh, in the course of the crural nerve. Had passed two plentiful motions. Had used but little of the evaporating lotion, not requiring it.—To continue the draughts.

7th, A.M.—Had rested tolerably well, without the opiate draught, till three o'clock. Passed suddenly a large quantity of fresh-coloured lochial discharge, with some coagula, which alarmed her: she fainted, and, upon recovering, felt numbness in the hands. I was sent for at six o'clock, and found her looking pale and very restless, with considerable agitation; pulse 120, and small; tongue perfectly clean. Her sensorium was disturbed, and she had refused the application of the lotion to her head, which had been ordered to be applied tepid, since she had complained of the cold. Had taken plentifully of beef-tea. She complained of being much troubled with wind, and was constantly eructating. These symptoms I considered as obviously hysterical.—She was ordered to take thirty drops of laudanum immediately.

7th, eight P.M.—Has passed copiously fetid lochial discharge, with some coagula. Tongue clean and moist; skin cool; pulse eighty and small.—Ordered to take the opiate at bed-time.

From this time there were no particular unpleasant symptoms, except those of an hysterical nature, to which she was constitutionally subject.

Stamford-street; January, 1827.

Vaccination.—The Editor has received the following letter from Dr. GREGORY:

Sir,—Your last Number contains some critical observations, by Mr. NORTH, on the mode of vaccinating which I recommended in a former Number of your Journal. Were I to allow these remarks to pass unnoticed, I might, perhaps, by some of your readers, be considered as tacitly assenting to the correctness of his criticisms. As this is by no means the case, I trust you will favour me by the insertion of a few observations in reply.

Mr. North's principal objections apply, first, to my statement that the success of the operation is not influenced by the quantity of blood that flows from the incisions; secondly, to my recommendation of a very sharp lancet; thirdly, to my *dogma*, that the vaccine lymph is fully elaborated or developed by the fourth or fifth day, and is even then more intense than on the eighth day; fourthly, to my practice of making six or eight punctures. On each of these heads I have a few remarks to offer.

1. The question whether bleeding from the wounds be or be not indifferent to the success of the operation, may easily be decided by a few comparative trials; but Mr. North has *assumed* as an axiom, that by such bleeding the lymph is either washed away altogether or over diluted. I have yet to learn how these positions are *proved*. The fact that a pretty free flow of blood from the wounds does not always (or necessarily) prevent a successful result, is undeniable. I have witnessed it many times. If it should be ascertained that, *cæteris paribus*, the greater the bleeding the less the chance of success, still Mr. North's theory is doubtful; for hitherto it has not been decided how long the virus must remain in contact with the wounded surface to produce its effect,—whether seconds, minutes, or hours.

2. Mr. North states that "the very sharp lancets which I recommend are objectionable," and adds, "I will not say that Dr. Gregory is singular in this opinion, but I *know* that most practitioners prefer a lancet with a roundish and rather *blunt* point." Now, Mr. North has either had experience in the use of very sharp lancets, or he has not. If he has not, how is he enabled to speak so confidently of their injurious tendency; and if he has, what becomes of his inuendo, that this practice is peculiar to myself?

3. My "dogma," that "vaccine lymph is in a state of great perfection and high intensity when first formed," is not (according to Mr. North,) "in accordance with the perfect development and formation of other morbid poisons." I should be much gratified by learning what are the morbid poisons here specially referred to. I have always been led to believe that the matter of chancre, gonorrhœa, psora, and ophthalmia, is capable of propagating each respective disease from the very moment of its formation. If this opinion is erroneous, I should wish to learn how long after the first appearance of gonorrhœal running a patient may connect himself with women, without endangering their safety?

4. Mr. North objects to making six or eight punctures, having sometimes (though such cases, he allows, are *by no means common*,) seen "severe and unmanageable inflammation, and great general disturbance," arise from such a cause; whereas "troublesome symptoms rarely, *if ever*, occur from the insertion of two or three punctures." In reply to this I beg to observe, that local and constitutional disturbance accompanying vaccination appear to me to depend altogether upon the *habit* of the child; and if its system be heated, or predisposed to inflammation, such effects will follow, whether one, two, six, or ten punctures are made. The fault lies, not in the *number* of punctures, but in the period chosen for the performance of the operation. The same child, two months before, or two months after,

might have had double the number of insertions made, without any unpleasant consequences, either local or general. Besides, if, with Mr. North, we look to the "development of other morbid poisons," we shall have still further reason to question the correctness of this criticism. In small-pox the practitioner would find but very little disturbance, either local or general, though the papulæ scattered over the body, or even collected on the face, were twice or even three times eight in number.

I have only further to add, that the mode of vaccination which I recommend is the result of considerable experience at the Small-Pox Hospital, where, during the year 1825, 4003, and in the year 1826, 3006 persons were vaccinated, making a total of 7019 persons who have been under my observation during the short period of two years.

I am, Sir, your very obedient humble servant,

Jan. 6, 1827. GEORGE GREGORY.

Letter on the Subject of Vaccination from Mr. Greenhow.

Sir,—Vaccination is a subject of so much essential importance to the safety and well-being of society, that every thing relating to its ultimate efficiency, or to the immediate success of the operation itself, cannot but possess considerable interest; and, certainly, if one mode of introducing the vaccine virus into the constitution is in reality more certain than another, it is important that this should be ascertained with precision, and well understood. It is in consequence of this consideration that I am induced to offer a few remarks on your correspondent's (Mr. North's) reply to Dr. Gregory's observations on the best mode of vaccinating.

Mr. North in the first place disagrees entirely with Dr. Gregory respecting the use of a sharp lancet in performing this simple, but important operation, and concludes that he does so in common with most practitioners. If, like myself, other practitioners have hitherto preferred a lancet "with a roundish and rather blunt point" from theoretical considerations, like those pointed out by Mr. North, without having tried the alternative of using a sharp one for the purpose, it becomes the more necessary that the question should be satisfactorily decided, and that, if in error, "most practitioners" should be set right on this essentially practical point. Since reading Dr. Gregory's paper in your Journal for November, I have myself tried a sharp lancet in vaccinating, and have certainly found its use more pleasant at the time, producing less irritation in the child, and more certain in its effect as regards the production of the disease. Its advantage over a blunt lancet seems to consist in its penetrating with sufficient ease to prevent the lymph from being rubbed off in passing through the cuticle, and entirely left on the surface, a cause of failure in operating with a blunt lancet which I am inclined to believe is by no means unfrequent. With regard to the quantity of blood drawn during the operation, I agree with Mr. North, and for the reasons he adduces, in thinking that its success is more certain when little, than when much, blood flows from the incisions. Whether using a sharp or a blunt lancet, I have ever avoided the discharge of much blood; and, if carefully used, this may be as certainly done with the former as with the latter instrument.

With respect to the number of incisions, there are many reasons which render it desirable that there should be several of them. 1. To increase the chances of success in communicating the disease. 2. To avoid the hazard of its progress being interfered with by the accidental injury of the pustule. 3. To obtain a supply of virus for future vaccination. And 4. To insure a characteristic scar being left on the arm sufficiently conspicuous and well defined to remove all future doubt of the individual having passed through the disease in a satisfactory manner. It seems to me a matter of indifference in what order the punctures may be arranged, provided they are made so distant from each other, as to avoid the danger of the pustules coalescing. I have been in the habit of making incisions in each arm, generally three in number, arranged longitudinally, thus ⋮ ; but, since reading Dr. Gregory's paper, I have tried the arrangement he recommends, and have found it answer well, in so far as it has left a most distinct indication of a regular and satisfactory disease. There is this advantage in introducing the lymph into both arms, that by watching the progress and decline of the disease we ascertain that it is the same in each, and have thus the best proof of the constitution being properly under its influence.

Provided the punctures are made at sufficient distances to prevent the coalition of the pustules, I should not fear too great a degree of inflammation from any number the operator may choose to insert. The only instances of inordinate inflammation from vaccination that have come under my notice have been produced by the confluence of several into one large and irregular pustule; and in these cases I conceive the specific nature of the disease to have been destroyed. The inflammation spread extensively over the arm and breast, a sloughing abscess was the consequence, the life of the child was endangered, but not lost, and, although an unusually large and irregular scar remained, I must consider its protecting influence as at least extremely doubtful. It is from the hazard of the specific inflammation of cow-pox passing into that of a phlegmonous or erysipelatous nature, when several scratches or punctures are made in immediate contact, that this mode of operating, as employed by many practitioners, is to be objected to. But, in whatever way the vaccine lymph may be introduced into the human constitution, I am satisfied of the importance of repeatedly inspecting the progress of the disease throughout its course, until the separation of the crusts. It is in this way alone that an adequate knowledge can be obtained of its perfection, and of the degree of reliance to be placed upon it. Hence arises (as I have elsewhere* pointed out) the propriety of restricting the performance of vaccination to the members of the profession, and I am sure there cannot now be any need for the poor to apply elsewhere. There are medical gentlemen in every village who will not refuse to vaccinate gratuitously, if necessary, the children of their indigent neighbours.

I am, Sir, your very obedient servant,

Newcastle-upon-Tyne; T. M. GREENHOW.
Jan. 15th, 1827.

Edinburgh Journal of Medical Science.

"Mark now, how a plain tale shall put you down."—*Shakspeare.*

New Species of "Amende Honorable."—In the Number for October, 1826, of a new periodical, called the "Edinburgh Journal of Medical Science," were contained two papers, and two engravings, taken from the Medical and Physical Journal without acknowledgment. Of this plagiarism we complained in our Number for November; a few days after the publication of which, we received a note from the editors of the Journal in question, containing an apology for the "offence," and we found that it had been sent in consequence of the proprietors of this Journal having threatened them with an action at law in the event of the same conduct being repeated. The letter is as follows:—

"The Editor of the Edinburgh Journal of Medical Science has observed, with much regret, the offence, unintentionally given, by the omission of the name of the London Medical and Physical Journal to the articles of Messrs. Bell and Shaw. A second examination will shew the proprietors of the latter that the papers are curtailed and reduced, for a place in the 'Medical Intelligence' of the former publication; and that the transference of Mr. Shaw's case from the small type, in which references are scarcely ever made, was a mere matter of typographical arrangement, the control over which was for the time delegated to the printer's foreman. That no hostility was intended, may be seen by the allusion made to the Medical and Physical Journal in page 409 of the same Number; and, it may be, that a wish to do no injustice to Mr. Shaw's instructive case was the reason for preferring a bad copy of his engraving to the many original drawings previously in the artist's hands. In fine, all the injustice done shall be repaid, at the price marked, in next Number; and the Edinburgh Journal of Medical Science will take the threat of the Lord Chancellor's kind interference into the bargain."

"*62, S. Bridge-street, Oct.* 29, 1826."

We were aware that this statement was not absolutely veracious, but still it appeared to be the apology of a man who was anxious to *back out* of the dilemma. In our Number for December, therefore, being the next after the above note was received, we inserted the following:—

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* See my "Estimate of the True Value of Vaccination," &c. published about two years ago.

"We have received a letter from the Editor of the Edinburgh Journal of Medical Science, and are perfectly satisfied with his explanation. We were not aware, at the time we noticed the mistake, that the proprietors of this Journal had written to him on the subject; otherwise we should not have noticed it. More importance has been given to the circumstance than it deserves."

The Editor of the Edinburgh Journal of Medical Science, as will be observed, had promised to make the "*amende honorable*," and accordingly on the 1st of January it appeared under the *appropriate* head of "Practice of Surgery:"—

"The November Number of the London Medical and Physical Journal was announced in the Morning Chronicle of 27th October last by a long advertisement, concluding with a remark, that the two surgical cases referred to Mr. Charles Bell and Mr. John Shaw, in *our* last Number, were cases 'which, in justice, the northern Editor ought to have acknowledged.' We do *acknowledge* (what we suppose the publisher means) that we neglected to mark upon them the words 'Medical and Physical Journal;' and sorry we be that Mr. Souter has taken so small a matter so much to heart, and beg leave very sincerely to assure him, that we will *give him a lift some day or other, by way of compensation, that will make that very heart of his sing for joy within him.* We wrote his 'proprietors' privately to the same effect on the 29th of October last, on receiving rather a bristly epistle from their collective wisdoms. We repeat it, we were as sorry *as if we had trod unintentionally upon their toes.* But, on opening the 'Yellow Book' for the month, *what a yelping, and fuss, and storm in a coffee-pot, presented itself!!!* No less than PLAGIARISM! a regular hue-and-cry after a 'Literary theft,' as Johnson hath it, 'an adoption of the thoughts and words of another.' Now, we ask, Who is that other? Is it Mr. John Souter, or Dr. Roderick Macleod? Or, are not rather the thoughts and words, simple and all as they are, the thoughts and words of Mr. Charles Bell and Mr. John Shaw, whose names stand attached in our Journal to their respective labours? We would like to hear how the *Editor of the 'Yellow' will get out of this scrape*, in his court of conscience, of having accused us of a crime which it was impossible we could commit."

This paragraph is written in such a temperate and gentleman-like manner,—so entirely devoid of anything bordering upon vulgarity, that we shall not run the risk of diminishing its effect by any comments of our own: we have, however, ventured to put in italics those passages which have most excited our admiration. There is much more in the same style, in which the learned Editor in question has drawn inferences without much regard to the premises. Among other things, he has accused us of "*malicious and designing falsehoods*," but without stating in what these consist. We prefer an opposite course, stating facts, and leaving others to draw conclusions.

1*st Assertion.*—In the note given above, it is stated that the papers taken from us "are curtailed and reduced," or, as he more politely expresses in his January Number, "licked into shape," for insertion in the Edinburgh Journal of Medical Science.

1*st Fact.*—Mr. Bell's paper is given word for word, without any alteration whatever; in Mr. Shaw's one word is altered (viz. *is* converted into *was*), and the description of a plate of Tiedemann's omitted, because the engraving was not given in the Edinburgh Journal. Every word of Mr. Shaw's is inserted without other change than the solitary one just mentioned.

2*d Assertion.*—"He" (viz. the unfortunate Editor of the Medical and Physical Journal) "had our written apology for the omission in his pocket before the day of publication."

2*d Fact.*—Let the reader cast his eye over the date of our friend's apology, and judge whether we could have been much influenced by the contents of an epistle which, in course of post, could not reach us till two days after our Journal had been in the shops of all the medical booksellers in London. It was indited at No. 62, South Bridge-street, Edinburgh, on the 29th of October, when our November Number was already completed; and that we had not received it was obvious from the notice in our Number for December.

Finding that our papers were so unceremoniously appropriated, we looked more narrowly into the other articles in the *Original* Department of our neighbour, and stated that he borrowed very freely from others as well as from us. To this he indignantly replies, "Without speaking of our present Number, of which we cannot but be vain, our 'Original Department' previously contains exactly seventy-eight papers, of which the account stands thus: Sixty-two original papers, *twelve translations, and four taken from other works.*" Thus, by a quibble as contemptible as that about the word plagiarism in the preceding paragraph, he would have his readers believe that he has altogether taken only four papers from other Journals, and enlisted them in that department of which he is so "vain." But if his translations are not from "other works," whence do they come? The Fourth Number of his Journal alone contains, besides the two he took from us, five other papers taken from "other works," viz. one by Dr. Christison, one by Dr. Gairdner, one by Mr. Hamilton, one by Dr. Bobillier, and one by Professor Dugès; and, not satisfied by swelling this department from these various sources, he has given three reviews under the head of "Original Papers," viz. 1. Various Works on the Arteries; 2. Dr. Elliotson's Paper on the Subcarbonate of Iron; and 3. Dr. Christen's History of Opium. This, we acknowledge, is fully entitled to the appellation of *original*, being quite novel in the history of medical journals; indeed we can only account for this by regarding it as a circumstance, the "control over which was for the time delegated to the printer's foreman." We advise our northern contemporary to let this happen as seldom as possible.

So much for the correspondence between the assertions of this individual and the plain unvarnished facts. It is not our custom to thus dissect the productions of our contemporaries; and if in this instance we have made "the galled jade wince," be it remembered the Editor of the Edinburgh Journal of Medical Science has brought this *exposé* upon himself by the intemperate article alluded to. From the specimens we have given of the manner in which the Edinburgh Journal has thought fit to apologise for an act of piracy too obvious to be denied, we trust our readers will be convinced that if we decline hereafter to answer attacks from the same quarter, it will be from regarding them as unworthy of notice. *Ohe jam satis.*

MONTHLY LIST OF MEDICAL BOOKS.

[No books can be entered on this List except those sent to us for the purpose; as, in the list hitherto transmitted, the names of works have frequently been given as published, which have not appeared for weeks, or even months, after.]

No. I. (to be continued Monthly,) of Medical Botany, or Illustrations and Descriptions of the Medicinal Plants of the London, Edinburgh, and Dublin Pharmacopœias, with those lately introduced into Medical Practice; including also a Popular and Scientific Description of Poisonous Plants. By JOHN STEPHENSON, M.D. Graduate of the University of Edinburgh; and J. M. CHURCHILL, Esq. Surgeon, Fellow of the Medico-Botanical Society of London.—8vo. London, 1827.

Rheumatism, and some Diseases of the Heart and other Internal Organs: considered in the Gulstonian Lectures, read at the Royal College of Physicians, May 1826. By FRANCIS HAWKINS, M.D. Fellow of St. John's College, Oxford, and of the Royal College of Physicians; and one of the Physicians to the Middlesex Hospital.—8vo. London, 1826.

A Syllabus of Surgical Lectures on the Nature and Treatment of Fractures, Diseases of the Joints, and Deformities of the Limbs and Spine: containing Descriptions of the Modes of applying twelve new Apparatuses, illustrated by twelve Plates. With Cases, showing the Advantages arising from the Plans of Treatment recommended by J. AMESBURY, F.S.A. F.L.M.S. Surgeon to the South London Dispensary, &c.—8vo. London, 1827.

A Treatise on the Diseases of Children; with Directions for the Management of Infants from the Birth. By the late MICHAEL UNDERWOOD, M.D. Eighth Edition, revised, with Notes and Observations, by SAMUEL MERRIMAN, M.D. F.L.S. Corresponding Member of the Imperial and Royal Academy of Sciences at Siena.—8vo. London, 1827.

An Essay on Medical Education. By WM. BARRETT MARSHALL, an Assistant Surgeon in the Royal Navy.—12mo. London, 1827.

A Physiological Enquiry respecting the Action of Moxa, and its Utility in Inveterate Cases of Sciatica, Lumbago, Paraplegia, Epilepsy, and some other Painful, Paralytic, and Spasmodic Diseases of the Nerves and Muscles. By William Wallace, M.R.I.A. &c. &c. Surgeon to the Charitable Infirmary of Dublin, and to the Infirmary for the Treatment of Rheumatism and Cutaneous Diseases in that City; Lecturer on Semeiology and Clinical Surgery.—8vo. Dublin, 1827.

An Essay on the Use of Chlorurets of Oxide of Sodium and of Lime, as powerful Disinfecting Agents; and of the Chloruret of Oxide of Sodium, more especially as a Remedy of considerable efficacy in the Treatment of Hospital Gangrene; Phagedenic, Syphilitic, and ill-conditioned Ulcers; Mortification; and various other Diseases. (Dedicated by permission to the Right Honourable Robert Peel.) By Thomas Alcock, Member of the Royal College of Surgeons in London; Member of the Medical and Chirurgical Society, &c. &c.—8vo. London, 1827.

The Medical Student. No. I.—8vo. London, 1827.

METEOROLOGICAL JOURNAL,

From December 20th, 1826, to January 20th, 1827.

By Messrs. Harris and Co. Mathematical Instrument Makers, 50, High Holborn.

December	Moon.	Rain gauge.	Thermom.			Barometer.		De Luc's Hygrom.		Winds.		Atmospheric Variations.		
			9 A.M.	MAX.	MIN.	9 A.M.	10P.M.	9 A.M.	10P.M.	9 A.M.	10P.M.	9 *a.m.*	2 *p.m.*	10 *p.m.*
20			42	43	38	29.79	29.42	93	95	E	SE	Foggy	Cloudy	Rain
21			39	41	33	29.56	30.00	91	85	NNW	N	Cloudy	Fine	Fair
22	☾		35	42	42	30.14	30.11	83	94	NNW	WSW	Foggy	Fair	Cloudy
23			45	48	45	30.12	30.16	98	97	W	W	——	Cloudy	——
24			47	52	45	30.17	30.19	98	89	WNW	NNE	Rain	——	——
25			46	46	42	30.22	30.25	96	98	NNE	NE	Cloudy	——	——
26			43	45	41	30.32	30.35	96	92	NE	NE	——	——	——
27			42	45	34	30.41	30.43	89	85	N NE	NNE	Fair	Fair	Fair
28	●		35	40	34	30.39	30.37	85	89	NW	NW	——	——	——
29			41	47	44	30.28	30.17	95	89	WNW	WNW	Foggy	——	——
30			45	49	42	30.10	30.11	89	93	WNW	WNW	Fair	Fine	Fine
31			45	49	45	30.09	30.01	96	90	W	W	——	Fair	Fair
Jan.														
1			47	49	39	29.82	29.48	90	98	W	WNW	——	——	Rain
2			39	43	25	29.42	29.48	87	90	W	WNW	——	——	Fair
3			26	29	18	29.41	29.40	81	74	W	W	——	——	Fine
4			23	30	28	29.58	29.70	74	90	W	N	——	Some S.	Some S.
5	☽		29	30	28	29.97	30.18	94	87	N	NNW	——	Fair	Fair
6			29	36	37	30.16	30.08	88	97	N	SW	——	Sleet	Sleet
7			42	46	42	30.00	29.96	98	98	SW	WSW	Rain	——	——
8			49	50	38	29.87	29.67	98	98	WSW	W	Cloudy	Cloudy	Cloudy
9			46	51	42	29.79	29.78	86	86	W	WNW	Fair	Fair	Fine
10			45	49	34	29.70	29.34	85	80	WSW	W	——	Rain	——
11			36	49	34	29.23	29.23	88	91	W	WSW	Rain	——	——
12			38	40	31	29.87	29.83	90	90	W	W	Fair	Fair	——
13	○		34	47	46	29.74	29.66	90	90	WSW	SW	——	Rain	Cloudy
14			51	53	33	29.29	29.65	84	76	SW	W va.	Cloudy	Fair	Fine
15			34	38	34	30.04	30.16	76	76	NWva	W	Fair	——	——
16			43	48	36	29.92	29.90	91	97	W	WNW	Cloudy	Rain	Rain
17			38	41	35	30.13	30.15	85	86	N	NNW	Fair	Fair	Cloudy
18			37	38	32	30.15	30.16	89	95	ENE	NNE	Cloudy	——	——
19			34	38	25	30.16	30.20	85	96	ENE	E	——	——	——

The Rain-gauge having frozen, no account was taken of the quantity of Rain fallen.

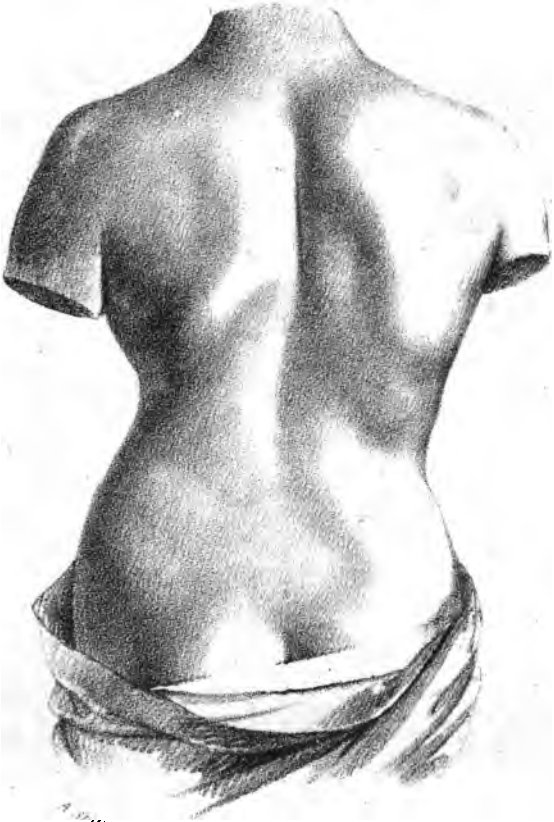
NOTICES.

Papers have been received from Mr. Chandler, Dr. Gregory, Mr. Kingsley, Mr. Hunter, Mr. Churchill, Mr. Thomson, Mr. Green, *and* Mr. Shaw.

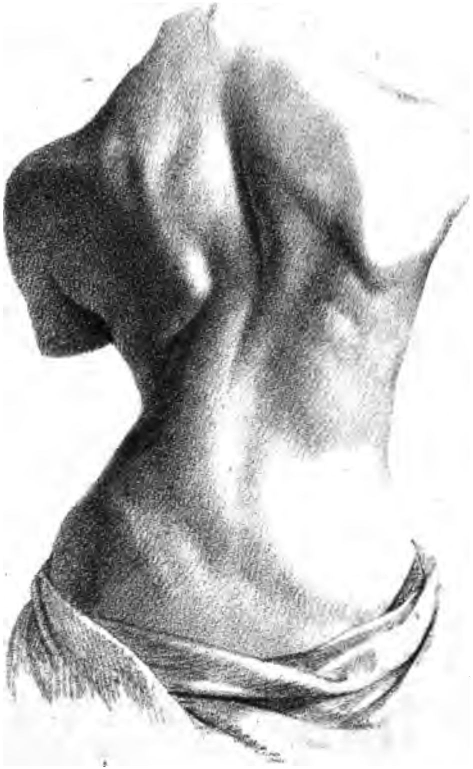
The Communication signed "An Apothecary" *is not fitted for insertion in this Journal.*

The case of "Diarrhœa" is not of sufficient interest for publication.

We shall take an opportunity of complying with Mr. Allison's *wishes.*



Mary Anne Roach, 6th Septr 1826



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J. Souter 73 St Pauls

Patient in the Middlesex Hospital.

London Medical & Physical Journal. [illegible] 1827

THE LONDON
Medical and Physical Journal.

N° 337, VOL. LVII.] MARCH, 1827. [N° 9, *New Series*.

For many fortunate discoveries in medicine, and for the detection of numerous errors, the world is indebted to the rapid circulation of Monthly Journals; and there never existed any work, to which the Faculty, in Europe and America, were under deeper obligations, than to the Medical and Physical Journal of London, now forming a long, but an invaluable, series.—RUSH.

ORIGINAL PAPERS,
AND
CASES OBTAINED FROM PUBLIC INSTITUTIONS AND OTHER AUTHENTIC SOURCES.

ERYSIPELAS.

Cases of Erysipelas accompanied by Affection of the Throat; with Remarks on the Propriety of limiting the Application of the Term. By JAMES M. ARNOTT, Esq. Surgeon.

THE connexion of erysipelas of the face with an inflammatory affection of the throat, is a circumstance to which attention has not hitherto been much directed; whilst the question of the contagious nature of the disease is one still considered *sub judice*. Were the following cases solitary examples of the former pathological fact, they would not perhaps merit being recorded; but, taken in conjunction with others which have been recently published,* they may probably possess some interest; and they bear also upon the question of the occasionally contagious character of the disease. In the remarks which succeed, I shall endeavour to employ these cases for the elucidation of the nature of erysipelas of the face itself, and afterwards attempt to show the propriety of restricting the application of this term, to one morbid condition, instead of continuing to apply it, as at present, to several having little pathological relationship.

The cases occurred in one family. The mother was first affected with inflammation of the pharynx, terminating in mortification. On her death, the husband was attacked with inflammation of the throat and erysipelas of the face. As he recovered, the daughter was similarly seized with inflammation of the pharynx and severe erysipelas.

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* By Dr. STEVENSON, in the second volume of the Transactions of the Medico-Chirurgical Society, Edinburgh, 1826.

Case I.—June 22d, 1826, Mrs. M—, ætatis forty-five, of spare make and delicate constitution, complained of pain and difficulty of swallowing. On examination, no redness could be perceived in the posterior fauces, and externally there was neither tenderness nor swelling. Tongue clean; no headache nor febrile disturbance. Attributed the attack to exposure to cold, whilst overheated, on the evening of the 20th instant.

She was ordered an emetic, a dose of Calomel and James's Powder, and subsequently a saline aperient.

23d.—Symptoms of affection of the throat as yesterday; but, on re-inspection, no redness could be discovered either of the velum, tonsils, or posterior pharynx, and the tip of the epiglottis was likewise seen to be of its natural colour. She refers the pain, which is only felt on attempting to swallow, to a situation behind the larynx, but pressure here does not give pain. Slight heat of skin, with some frequency of pulse; tongue clean and moist.

Leeches to the throat externally; saline medicine with Tartarised Antimony.

24th.—Sent for early to this patient, who had a restless night, owing to a distressing sensation of dryness and constriction in her throat, whenever she dropt off to sleep. Pain and difficulty of swallowing increased, and she complains of a troublesome quantity of phlegm in her throat, the excretion of which is attended with much pain. Some tumefaction in the anterior part of the neck, in the region of the thyroid gland, more particularly of its right lobe; and the skin is here tense and tender to the touch. Tongue moist, but has a patchy appearance; portions of its surface being white, whilst the rest is of its natural red colour. Slight hoarseness; no cough; respiration free; pulse frequent, of moderate volume, but resisting.

Eighteen ounces of blood were taken from the arm, and leeches were ordered to the throat externally.

Four hours afterwards, the blood drawn was cupped and buffy; the tension of the front of the neck had abated; she expressed herself much relieved; swallowed more easily, and had got down a dose of aperient mixture. She continued apparently better until towards night, when she became restless, with a slight flush on each cheek, and a countenance for the first time expressive of anxiety. Respiration free; pulse frequent, of rather diminished volume, but without resistance. I had this evening the benefit of Dr. Macleod's assistance, and it was resolved to give an opiate.

Symptoms of sinking, (apparently dependant on mortification having taken place,) continued to manifest themselves, and, early on the morning of the 25th, stimulants and tonics were resorted to. She rallied a little towards afternoon, but got worse at night, and died early on the 26th.

On dissection, the inflammation was found to have been of very limited extent, occupying that portion of the pharynx only which immediately borders on the aperture of the larynx. The limits of the inflamed part might be included within those of a shilling; on one edge of this portion (that forming part of the laryngeal aperture,) was a small spot of mortification, not much larger than that of a silver penny. The slough (for it was surrounded by a distinct line, as if nature had begun the work of separation,) occupied the right lip of the opening of the larynx, from the root of the epiglottis to the corresponding arytenoid cartilage, without, however, descending into the cavity of the larynx itself, which was free from disease. The vessels of the thyroid gland were more loaded than natural.

Case II.—June 29th, Mr. M—, three days after the death of his wife, with whom he had been in constant communication, complained of having been unwell for the last two days. Yesterday his throat felt sore; to-day it has been worse, with painful deglutition, and he expressed apprehensions that he was going to be attacked with the same disease as his wife. On examination, there was found a diffused redness all over the posterior fauces, but without much swelling. Next day (30th) the inflammation of the velum, tonsils, and posterior pharynx had increased, and a blush of redness, with tumefaction of the right upper eyelid, was observed. On the 1st of July, erysipelas had developed itself in the eyelid, and was extending on the cheek.

It is unnecessary to give the progress of the case in detail: the attack proved severe, the erysipelas having occupied the face, extended itself to the skin of the scalp, and did not complete its circuit of the head till the 11th or 12th; and it was not until the 22d that Mr. M— was able to sit up. Abscess formed in the eyelid primarily affected. The affection of the throat continued for a few days, and then disappeared. About the fifth or sixth day of the disease, the bowels became extremely irritable, and numerous motions were passed,—at first of offensive feculent matter, afterwards of thin, glairy, yellowish mucus. This last condition of the evacuations continued for several days.

The treatment pursued was in the first instance strictly antiphlogistic: when the violence of the disease had abated, stimulants and tonics were resorted to, with opiates at night to procure sleep. It may, however, be mentioned that some wine, given at a time when the patient was apparently much reduced, and was thought by his friends to be sinking from the effects of the purging, evidently did harm, and was not repeated.

Case III.—Miss M—, ætatis twenty, lived in the country at the time of her mother's death, and did not arrive in town until the day following. She frequently nursed her father during his illness, and at a time when the diseased skin in him was in a state of desquamation, first complained of being unwell,—viz. of headache and sore-throat, on the evening of the 22d July. On the 23d, I found her, with considerable febrile disturbance, complaining of great pain and difficulty in swallowing; and, on inspection, the velum palati, uvula, and tonsils were found of a bright red colour, with some swelling of the parts. The posterior surface of the pharynx was covered by a layer of yellow glairy mucus, not unlike the coagulable lymph found in the abdomen of women who have died of peritoneal inflammation after delivery. It could not be detached from the surface which it covered, but at one point where this was seen, there did not appear to be any abrasion. The patient complained of stuffing of the nostrils, and the left ala nasi was observed to be slightly tumid. On the 24th, vesicles appeared on the nose, and erysipelatous redness occupied the left cheek. After this the disease developed itself successively in the face, ears, the hairy scalp, first on the one side and then on the other, completing the circuit of the head by the 2d of August.

In this case the attack was more severe than in the preceding: abscesses formed in three of the eyelids; the vascular disturbance was so considerable as to require the abstraction of blood; and the affection of the bowels was likewise greater in degree. This state of bowels began on the fifth day of the disease, and continued for eight or nine days; the motions passed were numerous, and consisted of a thin, watery, yellow mucus, like yolk of egg beat up in water. When not checked by medicine, the number of motions and quantity of evacuation was so considerable as to enfeeble the patient. At first a combination of Hydrarg. cum Creta and Opium, and afterwards of Chalk Mixture with Black-drop, were employed to moderate the irritation of the bowels. The dose given at bed-time was intentionally omitted one night, and the consequence was that seventeen motions were passed in the course of it, inducing an unpleasant appearance of sinking; but out of which the patient rallied by simply checking the action of the bowels. The inflammatory affection of the throat continued several days, and then ceased.

The antiphlogistic treatment was adopted at the commencement of this case, as in the preceding; with the addition of a single venesection, to the extent of a pint. At a subsequent stage tonics were resorted to, but no wine.

The first of these cases presents rather an unusual instance of the small extent of disease which is occasionally sufficient to produce death. The symptoms of local affection were never such as to cause apprehension, nor the constitutional such as to excite alarm for the event, until those of sinking appeared. Indeed, we do not readily perceive why so small a spot of mortification should have been attended with fatal consequences; for that it was the occurrence of this, and not the very limited extent of inflammation, which produced death, seemed very evident. Had the situation of the gangrenous spot any connexion with the fatal issue? It occupied the lip of the laryngeal aperture; the mechanical part of respiration was not, however, affected. Was there any thing mysterious in the kind of inflammation? The case did not give that impression at the time of its occurrence. The patient was of a feeble constitution naturally, rendered still more so by suckling.

With regard to the other two cases (of well-marked idiopathic erysipelas), it seems to me that their origin was entirely owing to the existence of the preceding case. The father derived his disease from his wife; the daughter (who had not seen her mother) from her father. Had the first related case not have existed, the other two would never have occurred. In stating this, it is simply meant to be asserted that the latter owed their origin to a morbid profluvium derived from a body labouring under disease. The affection of the throat, in both cases, preceded that of the integuments of the face. Another circumstance worthy of remark, was the peculiar affection of the bowels, which occurred during the existence of the inflammation in the face, and supervened upon that of the fauces. This irritable state of bowels I have likewise seen in another case of erysipelas with affection of the throat, which I shall afterwards have occasion to notice. The time of its appearance, its course, and the character of the evacuations, leave little doubt that this affection of the intestinal canal was dependent on a state of mucous membrane similar to that which was observed in the pharynx. If such inflamed condition of the mucous membrane of the stomach and bowels exists in erysipelas, is this not sufficient to account for the state of the tongue, and other supposed bilious characters of the disease, without its being necessary to refer to an affection of the liver, the proofs of which are null?

The first, and indeed it may be said only, writer who has directed attention expressly to the connexion of erysipelas with an inflammatory affection of the throat, is Dr. STEVENSON, in the paper already referred to. In stating this, I am not unaware that such an affection has been casually alluded to by some of the writers on Erysipelas, as an occasional occurrence from the extension of the inflammation from the face to the fauces, but they have done so in an incidental manner, and without appearing to attach any importance to it. Dr. S., however, has described it in a more precise manner, and not as a consequence but as a precedent to the affection of the integuments; as one, also, which may occur in persons who have been much with erysipelatous patients, without the supervention of disease of the skin. To illustrate the connexion between the two affections, twenty-one cases are selected and given, although many more occurred in the author's practice. Of these, the origin of two (Cases 1st and 11th,) is not accounted for, and we may for the present consider them as having originated spontaneously: the remaining nineteen were all traced to other cases already existing. In analysing these last, for an object which will subsequently appear, it will be found that they stand thus—

Five of erysipelas simply (four of the face and one of the arm).

Three of erysipelas of the face and affection of the throat conjoined.

Ten of affection of the throat simply.

One of affection of the throat, with erysipelas supervening on the chest after the application of a blistering plaster to the neck.

The affection of the throat was characterised by a red or purplish blush of the velum pendulum and uvula, with very little tumefaction, but considerable pain in swallowing; excoriation of the inflamed surface frequently occurred, and superficial ulceration. It was ushered in by febrile symptoms, generally severe, even in the milder cases; and the period at which it appeared after the accession of the fever varied from the second to the sixth day. In all the cases of erysipelas having affection of the throat in conjunction with it, the latter preceded the affection of the face; in no case was the reverse observed. The inflammation of the throat occurred also so frequently in persons who had been much with patients labouring under erysipelas, that Dr. S. could not doubt their identity, and he came to the conclusion that it was erysipelas of the fauces. In either case the most successful treatment was found to be copious blood-letting, and the other parts of the antiphlogistic treatment.

Although the above-mentioned writer be the only one who has called our attention expressly to this subject, evidence of the connexion of erysipelas with an inflammatory affection of the throat are to be met with in the observations of other writers, whose object has not been so specially to notice it.

It is well known that the late Mr. Newby died in consequence of a puncture received in opening the body of a child, which died of enteritis, having also, it is said, erysipelas of the abdomen. What the disease was of which Mr. N. died, it is not our object at present to inquire: the following circumstances, however, which took place in his family are of some interest to our present inquiry. The account is given by Dr. NELSON, after his detail of the case.* "It is worthy of remark that, during Mr. Newby's illness, Mr. Jackson, his assistant, had *an inflammation of the fauces, of an erysipelatous appearance*, which terminated in suppuration of the tonsil. His pupil had an attack of low fever, which continued about a week. The house-maid was severely affected with *cynanche tonsillaris*, which terminated by resolution. The nurse had a slight attack of pyrexia, with *pain and stiffness of the neck*, on account of which she went home for a day or two; but, returning to the house, she was attacked with *erysipelas phlegmonodes*, which proved fatal. Another woman, who assisted in the room, had also the *erysipelas phlegmonodes*, but recovered."

Referring to some of the more modern medical periodical publications for cases of idiopathic erysipelas given in detail, in order to ascertain what evidence they might afford of the existence of affection of the throat in this disease, the contrast presented by the histories of *idiopathic* erysipelas, and of what is called *traumatic* erysipelas—viz. inflammation of the skin, cellular substance, or fasciæ, from local injury, is rather striking. Of the first affection the cases are very few, and the notices brief: of the latter the number is considerable, and the details given at length. Indeed, the only exception to this remark, and the only cases adapted to our inquiry, I have met with (although it must be owned the researches have not been very extensive,) are some related by Dr. DUNCAN, jun.† for the purpose of showing the utility of venesection in this disease. But, of the ten cases he has detailed at length, not one half are cases of idiopathic erysipelas, six being cases of inflammation of the skin, originating from some local cause of irritation, in patients in the hospital for other complaints. Thus in Case

2d, it arose from injury of the head;

3d and 4th, it attacked the mammæ after the application of blistering plasters to the chest;

6th, it came on after a blister applied behind the ear;

7th, it attacked the lower extremities of a patient admitted with œdematous affection of the leg and great thickening of the skin, resembling elephantiasis.

9th, it attacked the face of an individual having a disease of the throat resembling sibbens, on the application of a leech to a swelling of the ala nasi.

The remaining four cases are the only ones of idiopathic erysipelas, and that too of the face. In them we find the following evidence of affection of the throat:—In Case 1st, in the report on the second day after admission, it is stated that she complained "*of severe sore-throat,*" but the appearances are unfortunately not given. Case 5th was admitted on the 13th of May, with "*cynanche tonsillaris,*" the erysipelas appearing on the 17th. Of Case 10th it is said, on the day of admission, "Has a slight cough, with increased secretion of saliva, and some viscid expectoration. *The velum and uvula are also covered with small white specks.*" In the 8th Case alone no allusion is made to disease of the fauces: so that, out of the four, there are three having evidence of such affection.

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* Medical and Physical Journal for August 1823, p. 177.

† Edinburgh Med. and Surg. Journal for October 1821, p. 537.

A good illustration of the connexion of idiopathic erysipelas of the face with affection of the throat occurred not long since, in a patient in St. Bartholomew's Hospital, under the care of Mr. LAWRENCE. The phenomena and progress (which I witnessed) were very similar to those I have above detailed, only not so severe: there was the same affection of the throat, of the bowels, and appearance of the evacuations passed. The case has been reported in the Lancet of December 9th, p. 336, under the title of "Pharyngitis with Erysipelas."

These observations are sufficient to show that an affection of the throat is not of rare occurrence in this disease: but, in perusing them, it will probably also have been remarked, that it is only in cases of idiopathic erysipelas of the face that this affection has been observed; a circumstance which might give rise to the suspicion that there may be something peculiar in the nature of idiopathic erysipelas of the face. This suspicion will be increased on finding that a certain coincidence as to situation prevails in those instances where the disease has originated from contagion, the face being in such cases also the seat of the affection of the skin. It seems almost unnecessary to mention that instances of inflammation attacking the skin in the vicinity of wounds or ulcers, are not included in this statement: these are cases of disease connected with local injury; whereas it is of idiopathic erysipelas alone we now treat. In the two cases, then, which have been detailed by myself, the face was the seat of disease;—in seven out of eight cases given by Dr. Stevenson as originating from contagion, the erysipelas was of the face;—and, although Dr. Nelson has not distinctly specified the seat of the disease in the cases which occurred in Mr. Newby's family, there is presumptive evidence that the situation was here likewise the same. The exception in Dr.

Stevenson's eighth case, where it affected the arm, I am not disposed to attach much importance to: we are well aware how trivial a cause of local irritation will, under certain circumstances, originate inflammation of the skin; and, had the details of Dr. S.'s cases been given at greater length, (they are included in three or four lines,) some cause might have been discovered to account for this solitary instance. But it may be objected by some, that, in considering the above cases as arising from contagion, I am assuming that which is not yet proved. To this I can only reply, that the subject does not seem capable of demonstrative proof; and that, in the absence of this, the evidence offered by the history of these cases appears to argue an origin from contagion as at least extremely probable. The supposition of a morbid profluvium derived from a body labouring under disease, accounts much more satisfactorily to my mind for the origin of these cases, than any other cause or combination of causes.

Let us refer also to cases of erysipelas reported by other writers as arising from contagion, and where no affection of the throat prevailed or is noted, and we shall find a similar coincidence as to situation. Dr. WELLS* has recorded a number of instances to show the contagious character of this disease; some furnished by his own observation, others contributed by Dr. PITCAIRN, Mr. WHITFIELD, and Dr. BAILLIE. Excluding the primary cases (amongst which, the cases of the lady in childbed and her infant, p. 220, must be ranked, as it does not appear which was first affected,) those originating from contagion amount to sixteen. Of the sixteen, fifteen are cases of erysipelas of the face. The only exception, that of Mrs. Emerton, does not appear to have been a case of erysipelas, as the following extract will show. Dr. Wells found her labouring under the ordinary symptoms of what is called low fever. "There were besides, upon several parts of her skin, irregularly shaped patches of a bright red colour, and of the size nearly of a half-crown piece; but the parts so affected were not elevated, and gave no pain upon being touched. One of her arms, however, was considerably swelled, and appeared livid; but there was no visible disease of the outer surface of the true skin of the arm, nor was the scarf skin separated from it. She died in the course of the same day." In Dr. Baillie's communication it is stated that, "during a part of the years 1795 and 1796, erysipelas of the face was much more frequent in St. George's Hospital than he had ever before known it to be. Many persons were attacked by this disease after they came into the hospital; and, as the number of cases of it in a particular ward was much greater than in any other, he was hence led to suspect it was contagious, &c."

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* Transactions of a Society for the Improvement of Medical and Chirurgical Knowledge, vol. ii. p. 213.

Dr. Dickson, formerly of Clifton, and lately of the Naval Hospital, Plymouth, has given* some cases in proof of erysipelas being occasionally propagated by contagion. The first was in the wife of a gentleman, who, after being exposed to great fatigue, wet, and cold, in extinguishing a fire that had broken out upon his premises, had an attack of erysipelas of the face, with considerable fever and delirium. As it began to decline, his wife, who had nursed him, and occasionally lain upon his bed, was attacked with the same disease precisely, with a great degree of fever and very violent delirium. Another instance occurred under the following circumstances:—The gardener of a gentleman, occupying a small house in the garden, was seized with erysipelas of the face: all intercourse between him and the rest of the family was cut off, and the butler alone was directed to carry him whatever he wanted. Exactly as in the preceding instance, as soon as the gardener began to recover, the butler was attacked with erysipelas.

Along with these two is given a third instance, where the disease was in the arm; but this was certainly not erysipelas, although it was attended with inflammation of the skin. A young lady, in consequence of a blow, abraded the skin near the elbow; inflammation took place; "leeches were applied to some part of the arm, which in many places presented hard knobs;" "abscesses continued to form in the course of the principal lymphatics, from the elbow to the axilla." This young lady's mother slept with her, and, after the abscesses in her daughter's arm had been opened and were discharging, she complained of pain at the point of the middle finger of her right hand: "she does not *believe* the cuticle was abraded. On the next day, *the inflammation extended upwards to the bend of the arm, in a narrow line, not exceeding in breadth the sixth or fourth part of an inch,*"—sufficient, without going further into the case, to show that the disease was not erysipelas. I ought to state, in justice to Dr. Dickson, that it seems doubtful if the last case was furnished by him.

In the Medical and Physical Journal for April last, Mr. Blackett has related four cases of what are entitled

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* In the Medico-Chirurgical Journal for April 1819, p. 615.

Erysipelas. But, of these four, three are cases of inflammation of the extremities, arising from injury: one from abrasion of the skin of the ankle, another from wound of the hand by a fork, and a third from wound of the foot by a nail. The seat of the inflammation in these three cases we need not at present inquire into. The fourth case is the only one in which idiopathic erysipelas occurred, and *that of the face,* in a young lady. The attack seems to have been severe; and, after having detailed the particulars of it, Mr. B. observes, ' I must add, that, during this young lady's sickness, the nurse and servant in attendance were both attacked with erysipelas;" and, in some other remarks upon the same case, we find it stated, " It (erysipelas) was contagious in one family that came under my observation. Mr. ——, his lady, the nurse, and two servants, died."—Had the disease its seat in the face in these last cases also?

From the preceding observations, then, it would appear that erysipelas of the face has been repeatedly observed to be derived from contagion; and that it is frequently found to have an affection of the throat in connexion with it. But these are phenomena which characterise certain eruptive febrile diseases; and that erysipelas of the face is preceded and accompanied by such fever, it is unnecessary here to state. The accession of the febrile state previously to the appearance of the eruption,—the symptoms which characterise this state, more especially the peculiar affection of the sensorium, and the determinate course of the disease, are equally known; and, although I am aware that these remarks contain no novelty, still it appeared to me that, at a time when the term Erysipelas had attained such ubiquity of application, it might be advantageous to direct attention, in a more particular manner than has been recently done, to certain phenomena accompanying erysipelas of the face,—to advert to its pretensions to be considered as a distinct disease,—and to recall to notice its claims to be ranked amongst the order Exanthemata, from whence, since the days of WILLAN and BATEMAN, it has been improperly expelled.

But it will be said, does not, then, inflammation of the skin of the trunk and extremities occur as a consequence and symptom of the same febrile action as that of erysipelas of the face? To which I would reply, that it may; but that this is a frequent occurrence, seems negatived, by the fact of all systematic writers having selected this last disease for description; and personally I have not had an opportunity of witnessing a case where inflammation of the cutis of the trunk or extremities occurred in connexion with, and preceded by, the same febrile affection which characterises erysipelas of the face, or observing its determinate course. It is no contradiction to this statement to allow that occasionally in this disease the inflammation extends from the skin of the face to that of the neck and trunk: this is an exception to the general rule, and the primary affection is still of the face in the few cases where it does occur. That inflammation of the cutis, and to some extent, does sometimes take place in typhous fever, is only what this membrane shares in common with many others of the body in the course of this disease. That the skin may occasionally become inflamed to a greater or less degree and extent, in connexion with and symptomatic of other diseases, especially chronic visceral affections, is an accidental occurrence, and is neither accompanied by the fever of idiopathic erysipelas, nor observes its precise course. In those instances, again, where, from local injury, inflammation has attacked the integuments of the face, the febrile disturbance, when it occurs, is a consequence of the local affection. This is also the case with the vast majority of what are called cases of erysipelas, of the trunk and extremities: they are cases of inflammation arising from some local cause of irritation. For, whether the inflammation may have arisen from the irritation of leech-bites, that of a blistering plaster, from a wound or ulcer, or have supervened on integument distended by œdema, still all these, and many other instances where common inflammation of the skin to some extent takes place, have been considered and designated as cases of erysipelas. That no advantage, and considerable confusion both as regards the nature and treatment of disease, should arise from making use of the same term to mark a general febrile affection, and others of local origin, would seem pretty natural. If the inflammation of the skin, as such, is pretty much the same in either instance, and if our remedial means are also somewhat similar, still the principles which regulate the application of these means are considerably different in a diseased condition of local origin, and one which arises from a specific fever and is not to be cured but by guiding the patient through such fever.

But the term Erysipelas has not been limited in its application to affections of the cutis only, and of various origin: it has been applied to those of other tissues, differing very essentially in their nature, and treatment when inflamed, from the cutis. Inflammation of the cellular substance and of the fasciæ have been comprehended under this term also, and that merely from the circumstance of their being attended with more or less redness or inflammation of integument.—

But the difference which such cases presented from common erysipelas were too striking to be entirely overlooked, and it was probably to meet them that the addition of the word Phlegmonodes was resorted to. When we come to inquire, however, what pathological state is designated by the phrase "Erysipelas Phlegmonodes," we shall find that it also is applied to more morbid conditions than one.

Simple erysipelas, in all its extent of application, is understood by those who employ it, to indicate inflammation of the skin, connected, it is true, in their belief with something mysterious in its nature. To the skin the affection is limited; and it has been well observed by CALLISEN,* "Telam autem cellulosam non invadit erysipelas nisi cum phlegmone nuptum." Phlegmonous erysipelas, then, would seem to signify erysipelas complicated with phlegmon; and we find both writers and practitioners describing as cases of erysipelas phlegmonodes, those of erysipelas of the face complicated with abscess of the eyelids, or of inflammation of the integuments of the trunk or extremities with the addition of a circumscribed abscess at one point of its extent.

But these do not form the majority of cases ranked under the head of Erysipelas Phlegmonodes. The cellular substance is a tissue very liable to become the seat of inflammation. This may originate spontaneously, or at least without any very evident cause,—more commonly it is the result of wounds, fractures, and ulcers,—some severe and extensive cases have been produced by injuries of bursæ, particularly those of the patella and olecranon; in the vicinity of the bladder it is occasioned by a special cause—infiltration of urine; and it exists on the most extensive scale in many of those cases of disease presumed to be the effect of the inoculation of a poison from a dead human body. Although the phenomena attending inflammation of the cellular substance are sufficiently characteristic, they are liable to some modifications; the extent, violence, and rapidity of the process being much influenced by the causes which have produced it. In most instances it is accompanied by more or less redness or inflammation of integument, but not as an essential character of the disease. This may be so slight as not to attract attention: indeed, the puffiness and extreme tenderness of the part inflamed, together with a colourless integument, have been noticed as matters of surprise; or it may have been present in a degree to be denoted by such expressions as "erythema," or "erythematous blush." But usually the affection of the skin is considerable; and it is to cases of this description, particularly as they occur in the extremities, that the term Erysipelas Phlegmonodes is most frequently applied; the real disease, the inflammation of the cellular substance, being lost sight of in the more visible consequence or complication, the affection of the skin. It is not necessary that individual instances should be referred to in proof of this statement; for whoever takes the trouble to examine them in their details, will find that, in the great proportion of cases classed under the head of Erysipelas Phlegmonodes, and in many of those of Traumatic Erysipelas, the affection of the cutis is the least important part of the affair. We may merely cite one, and that for the purpose of contrasting the propriety of the name with the diseased condition described in the quotation.

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* Systema Chirurgiæ Hodiernæ, vol. i. p. 220.

A labourer* grazed the skin over his shin-bone, and three weeks afterwards, when it was supposed to be well, he applied for advice on account of an ulcer in this situation, about the size of a split pea, surrounded with inflammation. Three days subsequently, Dr. BUTTER saw the man. A dull and unequal redness, not unlike deeply stained mahogany, now extended itself around the small part of the left leg, from the inner ankle to the calf. The redness was peculiarly mottled, not unlike Erythema Papulatum, figured in Willan, without vesications. Agonising pain prevailed, particularly on the inflamed parts of the limb, and increased by the slightest pressure. An incision, five inches in length, was made into the parts down to the fascia. "The divided edges gaped widely, and looked like sliced bacon or brawn. The epidermis, rete mucosum, and cutis vera, were thicker, denser, and redder than natural. The cellular substance was distended, and considerably raised above the muscles, by a yellowish, gelatinous, and semi-fluid substance, intermixed here and there with dots of pus, and whitish shreds of slough."

To this pathological condition, (the fidelity of the description will be recognised, at least as applicable to inflammation of the cellular substance where its texture is loose and free from fat, as in the leg and fore-arm,) the name of Erysipélas Phlegmonodes is given. But we may ask, with what justness? The term Erysipelas has been made use of to denote inflammation of the skin simply; Phlegmon to designate a circumscribed inflammatory tumor, having a tendency to suppuration. But the diseased condition here spoken of, is, it is unnecessary to say, neither phlegmon nor erysipelas, still less is it a combination of both. The skin may share inconsiderably in the inflammation, and that too but secondarily; and the wide extent of disease renders the character of a circumscribed tumor inapplicable. The phenomena, also, are not those of phlegmonous inflammation; and even if a phlegmon is to be regarded as the type of inflammation of the cellular substance, then the same term is applied to very different morbid states, according as it is used in an adjective or substantive sense. Should it be said, on the other hand, that its tendency to spread gives it an erysipelatous character, then it must be answered, that the mere extent of inflammation can give it no more pretensions to be considered as erysipelatous (implying a difference in kind) in the case of the cellular tissue, than in those of the peritoneum, mucous membrane of the bronchiæ, &c. where it is equally ready to spread.

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* Case of Reeves, in Dr. BUTTER's work on Irritative Fever; Devonport, 1825, p. 101.

The propriety of applying the term Erysipelas to every case of common inflammation of the skin, merely because it occupies some space, has been already hinted at; and when we come to consider the extent and continuity of the subcutaneous cellular substance, the surprise would rather seem to be as in the case of the skin, that it should be limited, since we know that in tissues which resemble both in the circumstances just mentioned, limitation of inflammation is the exception, not the rule. Previous to the adoption of the treatment of inflammation of the cellular substance by free incision, it might have been urged that another circumstance in favour of its erysipelatous nature was its having, like erysipelas, a certain mysteriousness of character. In so far as the cellular substance is concerned, (whatever may be the case with the cutis,) this argument can no longer be used, unless, indeed, it be said that the utility of this treatment depends on the mysterious principle making its escape at the free aperture given for its exit.

As if sufficient ambiguity had not already existed from confounding under the same name, affections both of the skin and cellular substance, those of the fasciæ also have been added. The head and extremities, where these membranes are most developed, are constantly presenting examples of their being attacked with inflammation; and to the phenomena attending which, the appellation of Erysipelas has been given. We may take the head for an illustration; for we there find, two very distinct affections of the coverings of the cranium designated by this name. In the idiopathic erysipelas of the face, it frequently happens that the inflammation extends from the integument of this part to that of the cranium, the cutis alone being affected, and where, as the process successively attacks different parts of this tissue, the line of progress is marked by an irregular but well-defined elevated edge, and within which line the texture itself of the tissue seems, as it were, more developed, presenting, in connexion with that of the unaffected part, an appearance something like that of embossed work. To this affection the name of Erysipelas of the Head may with propriety be applied. But, on the other hand, it is of no less frequent occurrence, and most commonly as the result of injuries, that the tendinous aponeurosis covering the cranium, the sub-aponeurotic and the cellular substance, become the seat of inflammation, in which case that of the cutis by no means necessarily follows. The part is, indeed, puffy, œdematous, and tender to the touch; but the tissue of the cutis does not present the alterations in texture observed in the preceding case, but is simply elevated by the disease in the subjacent parts. To this aponeurotic and sub-aponeurotic inflammation the term Erysipelas is applied. Both these affections may, it is true, exist at one time; for as in the extremities the same cause sometimes produces inflammation of the skin and of the cellular substance simultaneously, so here also an injury may excite this process in the cutis and aponeurosis at the same time. The affections, however, are distinct, so much so that the last-mentioned part not unfrequently, as a consequence of inflammation, suppurates, and separates in shreds from almost the entire cranium, (to which kind of case the name of Erysipelas Phlegmonodes has been sometimes applied,) without the integument suffering; a circumstance owing, as has been remarked by M. Dupuytren, to the two parts having each a separate set of vessels. The treatment of these affections,—to take the local, for example,—is very different: in the one (that of the cutis) local treatment is of little value or importance, and our applications are regulated chiefly by a regard to the gratification of the patient's feelings; in the other (that of the aponeurosis, or parts subjacent,) local treatment —free incision—is of the first importance and necessity.

That great confusion should have arisen from this unreserved application of the term Erysipelas, and the utter neglect of precision as attached to its meaning, is a consequence sufficiently natural, and a circumstance equally certain. To adduce evidence on this point would be superfluous, but it may be allowed me to cite one proof in illustration of the disadvantage accruing from the application of the same name to different diseases, and that from an author whose attention had been called to the subject of diagnosis. Dr.

DUNCAN, jun. in his Essay on Diffuse Inflammation of the Cellular Texture,* expresses an opinion that many cases of phlegmonous erysipelas ought to be referred to this head; an opinion in which, without assenting to the propriety of the term "diffuse," or to the manner in which the author has generalised, we may readily concur. On coming to the causes of the disease, (or rather of the diseases which Dr. D. wishes to consider as diffuse inflammation of the cellular texture,) he alludes to contagion as an obscure cause, and instances what occurred in Mr. Newby's family as the only fact which could lead to the suspicion of its having such an origin. How to reconcile the circumstance of the occurrence of erysipelas phlegmonodes in this instance from contagion, and the circumstance of the erysipelas phlegmonodes of Mr. COPLAND HUTCHISON never arising from such a cause, seems to have perplexed the author. He allows that the circumstance of so many persons being affected with disease in the family of Mr. N. was remarkable, but concludes by expressing an opinion that he cannot consider them as sufficient proofs of contagion. Had Dr. Duncan considered that the erysipelas phlegmonodes of Dr. Nelson was one disease, and that the erysipelas phlegmonodes of Mr. Hutchison was another, he would have had less difficulty, and probably might have allowed that idiopathic erysipelas of the face, with abscess of the eyelids, may be derived from contagion; whilst he might, with equal truth, have asserted that inflammation of the cellular substance in the extremities is not.

It is from the same cause—the almost unlimited application of the term, whence has mainly arisen the vagueness of ideas with regard to disease, associated and almost synonymous with the very name of Erysipelas. And it is, therefore, not surprising, that Mr. TRAVERS should thus express himself in his recent work:—"To the term Erysipelas I object, as undefined in its application, complicated with endless varieties, and a perplexing catalogue of different species, which seems to augment in the hands of every additional describer."†

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* Transactions of the Medico-Chirurgical Society of Edinburgh, vol. i. 1824, p. 584.

† "On Constitutional Irritation," London, 1826, p. 534.—It is to be regretted that, in objecting to the employment of the term Erysipelas as applied to an affection of the skin, Mr. T. should, in another part of his work, have lent the sanction of his authority to its retention and employment in what appears to me an equally questionable sense. At p. 205, he divides inflammation of the cellular substance into "phlegmonous, erythematous, erysipelatous, and gangrenous." So likewise Dr. FARR states (Appendix, p. 545,) that "the lymphatics are liable to an erythema."—Query, what is erythema of a lymphatic?

In our treatment, as in our ideas of the nature of disease, of what indecision, vacillation, and anomaly, is not this name of Erysipelas the parent? Some conceive erysipelas to be of a bilious nature; others imagine it to be of an inflammatory nature; whilst both agree with a third, that it is of a most mysterious nature. One treats all cases of erysipelas by tartarised antimony, another by bleeding, and a third by bark. In idiopathic erysipelas of the face, why should not the same principles which regulate and modify our treatment of other exanthematous fevers, equally apply? On the other hand, why should we not call inflammation of the skin, occurring as it does as a primary affection, by its name, and treat it as such? Is there any more difficulty in conceiving that inflammation of the skin should produce a peculiar effect on the general system, than that inflammation of the peritoneum, mucous membrane of the bronchiæ, &c. should? Is there any better reason for treating a case of inflammation of the skin, or of the cellular substance, solely by attention to general means, than that it is called Erysipelas? Is it not this name alone also, and the mysterious ideas associated with it, which leads to the strange anomaly of seeing inflammation treated by such a stimulant as wine? Because inflammation of the skin or cellular substance, like inflammation of the mucous membrane of the bronchiæ, of the urethra, and of the eye, is less under the influence of general blood-letting than inflammations of serous membranes and other tissues, ought we therefore to treat it by stimulating the system at large?—But this communication has already extended to too great a length.

On reviewing, therefore, these observations, and for the reasons developed in the course of them, I would venture, in conclusion, to submit—

1. That the term Erysipelas should be restricted to that febrile affection of the system, accompanied with inflammation of the integuments of the face, to which it has most usually been applied; and that, until we have better evidence for so doing, the expressions Erysipelas and Erysipelatous should not be applied to affections of the skin in other parts of the body.

2. That the term Erysipelas Phlegmonodes should be abandoned, as unnecessary as well as inaccurate, and applied to dissimilar morbid conditions.

3. That Inflammation of the Cutis of the extremities and trunk, it matters not from what cause or however extensive, should be designated simply as such; to the exclusion of the terms Erysipelas and Erythema, as improper and unnecessary,

the one insinuating a difference in kind, the other implying merely a difference in degree.

4. That Inflammation of the Cellular Substance should be described as such, and by name; and, as no necessity exists for the addition of the term "diffuse," so long as we possess the adjective "extensive," that the adoption of the former word should be abandoned.

Lastly. That Aponeurotic and Subaponeurotic Inflammation should likewise be withdrawn from its erysipelatous disguise, and appear in its own proper character and name.

New Burlington-street; Dec. 20th, 1826.

P.S.—Owing to the delay in publishing the above remarks, I have had an opportunity of perusing the paper of Mr. Earle, in the Number of this Journal for January; and I am happy to find that, in so far as regards the impropriety of the application of the term Erysipelas Phlegmonodes to the disease of which he treats, our ideas coincide.

Jan. 4, 1827.

DISTORTIONS OF THE SPINE.

On the different Modes of treating Distortion of the Spine. By John Shaw, Surgeon to the Middlesex Hospital.

In pursuing the subject of my former communication,* I shall endeavour to give a short account of the several theories which prevail on the causes of the *lateral* or *serpentine* twist of the spine, with descriptions of the different modes of practice. We shall thus be enabled to compare the plans recommended in England with those pursued in Germany and France.

The first question which naturally occurs is, whether the species of distortion represented in the Plate is as common among the poor as among the rich? I so entirely concur in the general opinion, as to assert that, for fifty young ladies who become twisted between the ages of eight and fourteen, there is not more than one *poor* girl similarly affected. It appears to be the children of the rich,—or, we should rather say, of the classes of society from the tradesman, whose daughters receive the advantages of a modern education, to the highest in the kingdom, that are especially subject to this peculiar twist of the spine, which may be remedied or prevented; while the poor suffer more from the almost incurable deformity which arises from rickets or a scrofulous disease of the vertebræ.

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* See the Number for December.

As to the comparative frequency of deformity among boys and girls, I should say that, for one hundred young ladies who are twisted, there is not one young gentleman; while, among the poor, there are at least as many boys as girls deformed. Indeed, if we were to judge from the appearance of the people in the streets of London, we might believe that there are more crooked men than women in this class.

There is another distinction which, though important, does not seem to have been noticed: that the distortion of the spine in the poor generally commences in early childhood, while the twist is seldom observed among the rich before the children are sent to school, or begin their studies.

The question of how far this twist depends on bad health, or on a peculiarity of constitution, has been often the subject of discussion. Mothers are generally anxious to persuade us that their children, though twisted, are strong and healthy. There are certainly many girls who have slight curvature of the spine, in whom we can discover no signs of previous ill health, or of a weak constitution; but, in the greater proportion, we may observe one or more of the following circumstances:

Enlargement of the tonsils, or swellings of the glands of the neck; occasional discharge from the ears; fretted eyelids; the nostrils, cheeks, and lips, chopped or scurfy; the teeth bad, or small and irregular in form; the skin in different parts of the body affected with slight psoriasis, and not easily made to perspire, or so thin and transparent that the small veins are visible; the palms of the hands clammy and cold, or rough and arid; the fingers long and tapering; the nails badly formed; the hands and feet cold, and very subject to chilblains. All these symptoms are seldom presented in the same individual, but any two are sufficiently indicative of the system being torpid, especially if the girl is listless and unwilling to join in active games; or, while walking, lifts the feet heavily from the ground, and rests on the heels, instead of rising with a springy and elastic action from the toes.

Without due consideration, it might be alledged that this torpidity of the system causes the distortion. But, although a girl with such symptoms is in more danger than another of becoming crooked, the peculiarity of constitution indicated by them is seldom the sole cause: if it were so, the poor should be the most liable to be twisted, since the symptoms enumerated above are more common among them than among the rich, and are aggravated by the want of warm clothing, by bad food, and bad air; yet the children of the poor, after the age of ten, rarely become deformed, while the children of the rich, although they have enjoyed every comfort and attention that a kind parent can bestow, and have been even remarkable for the beauty of their form, become twisted about this time. It seems, therefore, just to conclude that, although young ladies whose figures are twisted may have a weak constitution, they would not have become crooked in other circumstances of life.

This is a difficult question,* but, the more it is considered, the more shall we be convinced that the present system of education, and especially the means generally resorted to for preventing or curing a deformity at its commencement, are such that a girl, even of the best constitution, is in danger of becoming crooked; while those in whom the symptoms already described are present seldom escape. How else can we account for the healthy girls of the poor never being distorted in the same manner, or for the weakly rarely becoming so, after they have attained a certain age. Indeed, I have scarcely ever seen the serpentine twist among the poorer classes of society, except where girls have been engaged many hours during the day in needle-work, or in occupations which rendered their muscles inactive: in several, the natural change in the constitution had not appeared until a late period,—not before the age of seventeen. Under the latter circumstances, distortion seems (in every class of society) to come on very suddenly, and to increase very rapidly.

The symptoms of the serpentine twist of the spine are generally observed by a parent in the following order:

1st. The frequent attempts of the child, when nine or ten years old, to prevent the dress falling off one shoulder.

2d. One shoulder appearing higher or larger than the other.

3d. One of the collar-bones, or one side of the breast-bone, or the breast itself, appearing fuller than the other.

4th. A thickness of one side, and a sinking-in of the other.

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* When only one of three or four sisters who have been brought up on the same system becomes twisted, we must believe that she is of a weaker constitution than the others. I have generally been able to discover a difference in the constitution, or to trace the deformity to some peculiarity in the habits, or to a more than usual degree of weakness following measles or scarlet fever. When the distortion is observed at so early an age as from two to six, I suspect that it proceeds from a decided fault in the constitution, and is consequently almost irremediable; and, when it occurs in a boy, at any age, I believe it is also from this cause, unless he has been brought up under the same restraints as a girl.

5th. One hip appearing to project, or, as the mother expresses herself, "growing out."

6th. One leg appearing shorter, and the habit of standing on one leg, with a hand behind the back catching the opposite elbow.

7th. A peculiarity in the manner of walking; one foot being swung round, and one shoulder thrown forward. This habit of walking sideways is particularly observable when the girl is entering a room, or going up to a stranger.

When the girl reaches the age of twelve or thirteen, her figure is so evidently twisted, that the mother consults a surgeon, and he points out a curve of the spine from side to side, or rather of a serpentine form. Although this curve was probably never before observed, it has been gradually forming from the time the difficulty of keeping the clothes on one shoulder was first noticed.

The following is an outline of the view I have been led to form on the immediate cause of this yielding of the spine:

A girl of nine or ten years of age, although apparently in good health, is liable to some of the symptoms enumerated at page 212; or a strong and healthy girl is sent to school, where for a great part of the day she is cooped up in a long, narrow, and perhaps cold room, with a number of girls; sleeps in the same room with several others; is not so well fed as at home; and the only exercise she is allowed to take is a formal and weary walk. A child of the strongest constitution, under such restraints, soon becomes as liable to be crooked as those who are originally weak.

Children thus exposed to have their natural functions disturbed are liable to distortion, and from their generally appearing weakly and dejected previously to its being discovered that the spine is twisted, a lurking and insidious disease of the vertebræ is often supposed to be the cause of the apparent ill health, and also of the yielding of the column. But the most popular theory is, that the curvature is the consequence of sitting awry, of standing on one leg, of the habit of stooping, and of sitting carelessly while writing, drawing, or playing.

Such habits may assist in producing distortion, and will certainly increase it when once formed; but I suspect that the anxiety to prevent girls sitting negligently is one of the most fertile sources of distortion: I mean the frequent injunctions to a girl of ten or twelve years old, to "hold herself up." When we try to sit erect and stiff, as the little girl is ordered to do, only for a few minutes, we feel a weariness and pain at the loins, which we remove by stooping forwards or lying back. Were a girl to do so, it would be observed, and she would be reproved; but, as it is not in her power to keep herself in the desired posture, she must relieve herself in some way, and she generally does so by allowing the lower part of the spine to sink to one side, which is not so much observed as stooping or lying back. If the chair is so formed that it affords scarcely any support, or if she be placed on a music-stool or bench, it is cruel to blame her, because the position is that into which the column naturally falls if she is not allowed to stoop or lie back; as may be proved by placing a well-formed girl, of ten or twelve years old, on a music-stool. If the lower part of the spine be observed after she has attempted to sit erect for a quarter of an hour, or even for a few minutes, it will be found to sink to one side.

A girl gradually gets the habit of sitting in this way, until it is remarked that her shoulders are uneven, and that the clothes slip off one of them.* As the mother is not aware that the cause of the inequality in the height of the shoulders is the yielding of the base of the column, she begs the child to keep her shoulders straight, and perhaps puts on braces or a back-board to keep them even. In this way the bend at the lower part of the spine is overlooked, and, the ligaments gradually yielding, it increases to such an extent that the child, to preserve its balance, makes a second curve in the spine: and now the mother is puzzled, for she finds that there is not so much inequality in the height of the shoulders, but that one appears larger than the other.

When this has taken place, the serpentine curve and the perpendicular twist are fully established; the ligaments, the intervertebral substances, the bones themselves, are all, to a certain degree, altered in form; and the muscles are not only daily becoming weaker, but more irregular in their actions, from the situation of their origins and insertions being changed. The girl is now in a critical condition. If the mother follows the advice which has been but too frequently given by men of eminence, to attend only to the general health,—or if she be induced to entrust her child to the care of a machinist or stay-maker, the distortion will get rapidly worse, and all the symptoms described at page 213 will appear in quick succession.*

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* In the greater proportion of cases, the lower curve is to the left side, and the clothes at first slip off the right shoulder, (i. e. from the left shoulder being the highest;) but, when the second curve takes place to the right side, the right shoulder projects and gradually becomes higher, while the upper part of the left hip appears to "be out."

Several distinct modes of treating this species of distortion prevail in England. One patient is rigidly confined for months to the same position; another performs certain violent exercises for years; a third is rubbed and shampooed; a fourth wears artificial supports, such as stays, collars, &c.; a fifth submits to attempts to replace bones alledged to be dislocated; a sixth is treated by leeches and blisters, or by caustic and moxa; and many are advised to trust merely to attention to the general health.

The variety in distortion is so great that there are many where none of the systems of treatment hitherto proposed have been successful, and for which probably no remedy will be discovered. We know of no plan of treatment which will remedy a distortion where there is anchylosis of the vertebræ or of the ribs; nor that will make the shape perfect where the deformity depends on a congenital deficiency in the size of one side, (or on one that may be traced from the period of teething,) a defect as common as a small eye or a diminutive arm or leg; nor has any mode of treatment been divulged that will restore the spine to its proper form, where a curvature is the consequence of a collapse or diminution in the size of the area of one side, from disease of the lungs.

Although the plans mentioned above are directly opposite, both in principle and practice, so many testimonies are offered in their favour, that we are almost bound to believe they have been each attended with a certain degree of success. The only way we can reconcile such conflicting statements is by supposing that they who have reported the success have not been aware that there are many kinds of distortion, each depending on a different cause; or that the proposers of the several plans have deceived themselves by attaching importance to success in one or two instances, and in forgetting that there are so many distinct stages in the progress of a common case that every mode may at particular times be applicable. To me it has always appeared that a judicious combination of the modes reported to be useful was the most likely way of remedying a distorted spine. Thus, since the serpentine curvature generally originates in weakness of the muscles of the back, it is best remedied at its commencement by appropriate exercises, and attention to the general health. In the second stage, the muscles, ligaments, and intervertebral substance acquire a certain form, the good effects of exercises are not so apparent, but the figure may be improved by artificial supports. In the third stage, the vertebræ themselves become altered in shape: the remedies proposed for the second degree are still useful, but, that the bones may again *grow into a natural form,* the spine must be stretched, and kept so during the greater part of the day and night. When the ribs and sternum have become much displaced and mis-shapen, the distortion may be said to be in its fourth degree. All the means proposed for the preceding stages must still be rigidly persevered in, but a variety of contrivances for compressing and remodelling the ribs must also be adopted. The fifth or last stage is anchylosis. In this, any one, or all the plans of treatment combined, are little more than palliatives, or preventives of further increase.

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* I know that I shall stand excused for this expression by my professional brethren, who have done me the honour to consult me on the cases of their own children: they have been but too well convinced of the danger of trusting to the advice of attending to the state of the bowels, and to give tonics, with fresh air, shower-bath, spunging, friction, &c. When the spine is once curved, it is as little likely to be remedied by such means, as a crooked tree is to be made to grow straight by merely manuring and watering it. But, notwithstanding this apparently obvious conclusion, nine in ten of the girls who are much distorted have gone on for years, in the hopes that such means will be sufficient to restore the figure. The general health should, in all the stages of distortion, be particularly attended to: attention to it may prevent distortion, or it may perhaps be the means of checking a slight degree; but, when the curves are fairly formed, I believe that it alone will not prevent the rapid increase of the deformity.

But, as far as I can learn, this system of combining and applying the means according to the nature of the case, is not generally pursued. One particular mode is trusted to; and this, I believe, proceeds from those who propose the several plans having theories of the causes of distortion peculiar to themselves. I shall endeavour to make a short analysis of these theories, and of the plans of treatment generally pursued.

Plan of Treating Distortions by Confinement to the Horizontal or Inclined Plane.

The plan of *rigid confinement to one position* is founded on the idea that the muscles of the spine are debilitated, and act irregularly, in consequence of irritation or disease of the vertebræ, and that repose is necessary to subdue this irritation, and to restore the muscles to a natural condition.

I shall venture to assert that, in nineteen of twenty cases of lateral curvature, there is no disease of the vertebræ; that the pain in the back and shoulder, supposed to be indicative of disease, may be relieved sooner by other means than by rest; and that there is seldom or never that peculiar wasting or spasmodic affection of the muscles which are so frequently observed where the vertebræ or ligaments are diseased. In those cases where the muscles of the spine appear smaller than natural, it will be found that they either correspond with the condition of the other muscles of the body, or that the patient has been in the habit of wearing stiff stays.

The effects produced by confining a girl to the inclined plane are often misunderstood: she may at first be relieved from a weary pain, and at the end of three weeks or a month the spine may be found straighter; but if the same plan be pursued for some months, in the hope of improving the spine still more, or with the intention of preserving the improvement which has already taken place, all will go wrong: the patient will be reduced to such a state of weakness as to be scarcely able to walk or stand, and, when she attempts to sit up, will sink almost double, or into a state worse than she was when she first laid down; and there are few cases where the general health is not materially injured. But, notwithstanding these results, so much has been said by men of great eminence in favour of the theory on which this plan of practice is founded, that the confinement of girls with slight distortion of the spine, for months, and even years, is still often recommended.

The first few days a girl is laid on her back, although she is easy, the confinement is irksome; but she presently gets accustomed to the position, and almost enjoys it, and, if she be allowed to sit up, begs that she may again lie down. This is used as an argument to prove that, before the girl lay down, the spine was in a state of irritation; that it was relieved, and is getting better; but that if she rises the irritation will return, as is shown by her wish to lie down again: and this is alledged to be a clear proof that she herself is conscious of the good effects of the position. But I have known this argument used from month to month, and even from year to year. If there were disease of the bones or ligaments, the reasoning would be sound; but, when applied to cases of common distortion, the distinction between cause and effect seems to be overlooked.

Performance of Violent Exercises, a popular mode of treating Distortions.

This mode of treatment was founded on the supposition that distortion proceeds from the muscles of one side being so defective in strength as not to be able to counteract the effect of their more powerful antagonists. This opinion has arisen from the appearance of the muscles on the concave side of the curvature, when exposed by dissection, being supposed to be indicative of their having been strong and contractile, while those on the convex side seem to have been elongated and relaxed. From this it was inferred that the muscles of the concave side overpowered the others, and thus drew down the spine. This theory appears satisfactory, until it is recollected that the curvature to which young ladies are subject, is not a bend of the spine to one side, as the term *lateral* would imply, but is of a serpentine and twisted form.[*] But the great mistake is in supposing the contraction and shortening of the muscles to be the *cause,* when it is the *consequence* of the distortion. The muscles, like the ligaments, accommodate themselves to the relative situation of their origins and insertions. When the sternum almost touches the pelvis, in cases where the lower dorsal vertebræ are wasted, the muscles of the abdomen are only a few inches long: would it be said that the deformity was in this instance caused by an irregular action of the abdominal muscles, prevailing over those of the back? Or when, by the same disease of the upper dorsal vertebræ, the chin approximates the chest, and the œsophagus is not more than four inches in length, from the mouth to the stomach, would it be argued that the muscular coat of the œsophagus had pulled down the head? (for its fibres are as strong as certain muscles of the spine, which are alledged to draw it to one side.) Or if, on dissection of an arm, where the humerus had been shortened by a badly united fracture, so as to diminish the distance between the origin and insertion of the biceps, this muscle were found, as in the case related by Mr. Hunter, six inches shorter than that of the other arm, would it be said that the biceps had produced the deformity? The condition of the muscles in serpentine curvature is analogous: those between the vertebræ, ribs, and scapulæ become gradually altered in length, according to the position into which these bones have fallen. One of the best proofs that the change in the form of the muscles is not from spasmodic contraction, is in the skin also becoming diminished in length, in proportion to the approximation of the bones.

However, it would be of little importance whether the

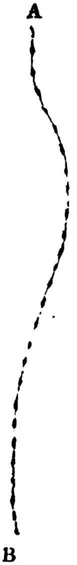
[‡] The lateral curve of the spine, or bend to one side, without a perpendicular twist of the column, is not nearly so common as the serpentine twist. There was lately a good example in the Middlesex Hospital, in consequence of a rheumatic affection of the muscles of one side; and I am now attending a young gentleman in a similar condition, which proceeds from his inclining to one side to relieve the irritation produced by a slight inflammation of some of the ligaments of the spine. When the spine has yielded in consequence of disease of the hip, we generally find that the curve is merely to one side: there is an example of this at present in Northumberland Ward.

theory were correct or not, if the treatment founded on it were successful. It is alledged to be so; but, so far as I can judge, although properly regulated exercises are useful in every case of distortion where no inflammation is present, they are equal only to the cure of the slightest cases of lateral curvature. I may be mistaken in this, but I am positive that even a slight distortion will be more quickly remedied by combining various modes of stretching and supporting the ligaments and muscles, with exercises, than by exercises alone.

The immediate good effect of exercises in slight cases, the rapid increase of strength in those who are much distorted, and the consequent improvement in their form, deceive many into the hope that a confirmed curvature may be removed by perseverance. But the result of the cases where I have fairly tried the effects of exercise, and the state I have found the spines of those who had faithfully performed them for many months under proper superintendence, have convinced me that, where the ligaments and bones are altered in form, exercises are inadequate to the restoration of the shape. The statement made by Dr. COLLIN, of Paris, corroborates this opinion: of ten patients whom he examined, not one had been cured by a long continuance in the performance of the exercises at one time in vogue in Paris; such as drawing up weights, climbing ropes, &c.

I am, however, fully sensible of the value of exercises, and of such as operate more immediately on the muscles of the trunk: but I, in common with others, over-rated their effects at one time. I am now convinced that, in cases of confirmed curvature, the only good produced by exercises is counteracting the debilitating effects of certain other necessary modes of treatment. This question is considered at much length in the Supplement to my work on Distortions. I shall now only beg my reader to consider whether he has not often seen people who are strong and muscular, and who have for many years been constantly engaged in active and laborious exercise, as much or more deformed than weak and delicate girls? This surely is a convincing proof that exercises alone will not cure distortion.

Since writing the above, I have seen a young lady, who, for the preceding eighteen months, had every day, excepting Sundays and during the holidays, gone some distance to be shampooed, and climb a rope and ladder, and pull up a weight by a strap to be fixed round her head. Her friends stated that she had become much stronger, and her figure had been improved. This I can readily believe; but the condition of her spine, after attempts continued for eighteen months to make it straight, may be judged of from the plan.



A, is the upper part of the spine; B, the lower. The line is reduced from one made by taking an impression on blotting paper of the spinous processes dotted with ink.

In this case no artificial supports had been worn, nor had any means been taken to keep the upper part of the spine extended. I have no hesitation in saying that, had these been combined with the exercises, instead of merely trusting to the girl resting herself in the horizontal position after she reached home, the improvement in her form would have been much greater. The only additional remark I shall make is one elicited by a consideration of this case: that exercises, if not varied according to the place and nature of the curve, may increase rather than diminish the twist. By referring to the sketches of the figures climbing the rope and mounting the ladder, given in the Supplement to my work on Distortions, it will be seen that the curvature in the upper part of the spine cannot be improved by such exercises.

Treatment of Distortions by Artificial Supports.

The system of treating distortions of the spine by *artificial supports* is founded on the theory that the column is not sufficiently strong to sustain the weight of the chest, head, and shoulders. This theory is in part correct, but, certain important facts having been overlooked, the plan of practice founded on it has been so often injurious, that many surgeons have condemned every form of artificial support as useless or hurtful.

When instruments are constantly worn, they produce bad effects; but, if properly managed as auxiliaries, they assist in keeping the spine straight, and afford the means of enabling the patient to walk or sit for a certain time, without any danger of the spine falling back into the curved state which we are endeavouring to remove by other means. But it is not surprising that prejudice should have arisen against the tremendous engines generally employed for this purpose.

However, although the appearance of many of these machines is sufficient to alarm a mother, the assurances of their being the only means of cure have overcome their scruples, and delicate girls, regardless of pain, have submitted to wear them until many distressing consequences have ensued. The shape of the bones of the face is often altered, and the teeth displaced in an extraordinary manner; or the muscles of the cheeks are wasted by the pressure of the chin-straps, so as to increase the peculiar character of the countenance sometimes observed in deformed persons; and many are marked for life by the scars of ulcers under the chin.

But independently of those effects, which are surely as bad as the deformity proposed to be remedied, other consequences equally distressing ensue. By the pressure of the heavy complicated iron-work on the hips, back, and shoulders, many of the muscular fibres are absorbed; and the muscles by which the column should be supported gradually become so weak, from want of use, that the patient must either submit always to wear an artificial support, or, after enduring torture for years, to fall into a state worse than before using the collar.*

But, although I object to instruments clumsily contrived, or to such as are used without due attention to the functions of the ligaments and muscles, I am so satisfied of the necessity of artificial supports, that I recommend them, in certain forms, in almost every case of distortion.

The discrepancy of opinion on this question is a source of great difficulty to the friends of patients, and especially to those from the country, who are "anxious to take all the advice London can afford." By one eminent surgeon they are told all supports are injurious; by another, that perseverance in the use of them will certainly cure this deformity. About eighteen months ago, a patient, whom I had recommended to wear supports when she walked or sat up, consulted an eminent surgeon in the east end of London: his advice was, to burn them, and trust to nature. From the answers received from patients, I am led to believe that this is the advice generally given: but one of the highest authorities in London lately recommended quite an opposite mode of treatment for a young lady, who had been also a patient of mine. However, notwithstanding the deference due to a senior of great merit, I would venture to alledge that his advice was too much in the opposite extreme to that of trusting to nature; for the effect of encasing a girl in a machine from morning to night must be to debilitate the muscles of the trunk, and thus to add to the original cause of the distortion. The machine recommended in this instance was that generally known by the name of the "invisible back," invented by Callam, the truss-maker, in Great Queen-street, who died lately. I have always objected to this instrument, because, although it may form a good temporary support, it is so neat and ingeniously contrived to conceal the deformity, that parents are apt to be deceived by it. When used with precaution, and only as the means of giving support for a certain number of hours, it is not very objectionable; but, as it has been injurious in all the cases that I have known it to be worn according to the directions of the maker, I have preferred a simpler form of support, and one which does not confine the shoulders, and consequently does not interfere with the growth and expansion of the chest. When a girl with a slight curvature of the spine arrives at such an age that she is not likely to grow, this instrument may be useful in concealing the deformity; but still the danger of the muscles of the spine being gradually debilitated should not be lost sight of, but guarded against by exercising them actively for at least half an hour morning and evening.

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* The principal objection formerly made to such instruments was, that the pelvis might be distorted by them; but I trust it has been satisfactorily shown that there is no danger of this except in rickets. A case showing some curious effects on the muscles of the neck by a long perseverance in the use of one of these instruments, is given in the Supplement to my work on Distortion.

The question of the propriety of girls wearing stays has been often canvassed: it is not easily answered.* I have entered at considerable length into the discussion in the Supplement to my work on Distortion, where I have endeavoured to show (although tight stays may be one of the causes of distortion,) that, when the spine has once yielded, there should rather be an addition than a diminution of the means of artificial support, until the natural powers, by which the spine is enabled to sustain the superincumbent weight, are restored. But, although stiff stays may for a time prevent a curvature from getting worse, and even for the first few weeks appear to improve the figure, they are not calculated to correct it; because they do not afford the means of gradually elevating the spine, but only of preventing it from sinking. It is hence often found that, if stays of the same size be worn for some months, the bones, cartilages, ligaments, muscles, even the skin, acquire a certain form and length: I therefore always recommend such supports as can be gradually elevated according to the change produced in the curve.

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* "A curious edict was passed by the Emperor Joseph the Second, to restrain the use and fashion of stays: in the preamble, it set forth that they impaired the health and growth of the fair sex. In all orphan houses, nunneries, and other places of public education, they were strictly forbidden; and young ladies of the

In a young lady, twelve years old, from the 25th November to the 3d of January, the curve was so much straightened that she measured two inches taller. In another, between seventeen and eighteen, where the curvature was much greater, the difference in three months was four inches. I had gradually, during that time, raised the supports four inches. The increase which also takes place in the breadth of the chest, makes stays still more objectionable.

Attempt to cure Distortion by reducing Vertebræ alledged to be Dislocated.

The proposal to cure distortions by replacing vertebræ alledged to be dislocated, is founded on so mistaken a notion of the structure and physiology of the spine, and of the functions of the parts connected with it, that it scarcely deserves a serious refutation. The merest tyro in anatomy knows that the effect of a sudden and violent change in the position of a vertebra must be more or less an injury of the spinal marrow. But, notwithstanding the demonstrable fallacy of the opinion that lateral distortion proceeds from dislocation, cases have been detailed in former Numbers of this Journal, where it is

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court still persisting in the fashion, were threatened with the loss of the "customary indulgencies and countenances" bestowed on their class. Thus the use of stays was made a sort of immorality. The College of Physicians was enjoined to draw up a Dissertation in support of the royal edict, which was distributed gratis. But what can a monarch do against fashion? the liberty of the corset was soon re-established in Austria in its full severity."

stated that the curvature has been cured by replacing certain vertebræ alledged to be dislocated, and that this was effected by main force of pulling and pushing. The author has even seriously related the nervous phenomena resulting from the change he produced in the position of the vertebræ. It is to be hoped that he will be always as easily satisfied; for, were he to succeed in his endeavours, his patient would assuredly be paralysed. Happily it is scarcely possible to alter the position of a vertebra without a degree of violence that is not likely to be used; and, therefore, notwithstanding the application of a *windlass* to pull the bones into their proper places! there is little danger of the spinal marrow being torn across or squeezed.

The description given by patients of the manner they have been pulled for the purpose of reducing the dislocated bones, is sufficiently alarming; but, in cases of simple lateral curvature, the *attempt at replacement* is not so injurious as the rigid confinement to the horizontal position for months, under the pretence of preventing the *replaced vertebræ* from slipping out of their places.

I have seen several patients who had submitted for a long time to this system of treatment: each of them had become miserably weak. One young lady had been confined for three years, until a short time before I saw her. On my first visit, I requested her to lie down on the sofa; she replied, "May I?" and, on asking why she was afraid to lie down, she said that she had not done so for three years without having one person to keep her head steady, and another to her feet, that the bones might not again be displaced. On assuring her that she need not be afraid, she, with much eagerness, asked if she might turn in bed without any risk of the bones slipping out? for she had been strictly cautioned against indulging even in this degree of motion.

This young lady had been reduced to such a state of weakness by this system of restraint, that her parents became alarmed for her life, and changed the plan of treatment so far as to encase her in a machine like a cuirass. While supported by this, she could walk; but, although I was told that she had become stronger, the muscles of her back, when I first saw her, were like shreds of ligaments, and the spine was so stiff and unyielding that I suspected anchylosis had taken place. I, however, proposed to try what could be done by combining gentle exercises of the muscles of the back with proper rest and support. By persevering in this plan, she became in a few months strong and muscular, and even gained nine pounds in weight. The restoration of her health afforded a satisfactory proof that the symptoms of consumption, under which she was supposed to be sinking, depended entirely on the confinement. I do not hesitate to say that this young lady, who had been rigidly confined at home for years, and even carried in a litter to the sea-side, and laid out on the beech, should not have been at any one time confined to the same position for twenty-four hours, nor prevented from taking daily and active exercise.

However, I occasionally hear from sources on which I can depend, that this system of reducing dislocated vertebræ has improved the curve; and although, in the eight or ten cases I have seen, the patients had not been benefited, I can believe that it has been of service. The process of stretching and pulling (although done with the view of reducing bones said to be dislocated,) when combined with rest on the plane, may make the spine much straighter, in eight or ten weeks. But if the patient, instead of being now brought into a state of great activity by exercise, is confined to the same position for months or years, for the purpose of consolidating the spine, and preventing the bones, which the operator alledges he has reduced, from again slipping out, bad consequences, and particularly great debility, must assuredly follow.

The most likely way of restoring a crooked spine to its natural form is to combine the several modes, and take advantage of what is good in each. This may, in a great measure, be effected by the moveable plane described in my last communication. It affords the means of stretching the ligaments and muscles in whatever manner or degree we choose, and of retaining the vertebræ and ribs in their improved relations to each other. It also admits of the patient resting in particular positions, and of performing such a variety of exercises, that the weakening effects of the stretching, compressing, &c. are completely obviated.

By the combination of appropriate exercises, rest, and support, the patient, if previously in bad health, becomes strong, and would, I am persuaded, continue in good health, even were she not to quit the plane for months. But I never put a patient to such a trial: I permit them to sit up for four hours, at least, out of the fourteen, (counting from seven in the morning until nine in the evening,) and to sleep on a comfortable hair mattress. It is of great consequence to prevent the spine from sinking while the patient is not on the plane, as the cure often depends on a proper growth of the intervertebral substance, and even of the bones themselves. To give support during walking, we may use the long crutches employed by the Germans and French; but a girdle round the pelvis, with light moveable supports attached to it, is more convenient.

The long crutches of the Germans and French are of great use when patients are treated in the manner described in my last communication: they not only afford the means of support to the lower part of the spine, but of exercise, and of so active a kind as in a great degree to obviate the ill effects of the continuance in the horizontal position. The crutches are so long that merely the tips of the toes touch the ground, but still the patients move with great velocity on them. The effect, indeed, is rather ludicrous; for the head and neck are so sunk between the shoulders, that the appearance of several girls running along very much resembles the pictures given of a flock of kangaroos. But the appearance would be of little consequence, were the position good; but it is not, for the cervical vertebræ are curved.

When the girl sits at the piano, writes, or draws, the chair crutch may be used instead of the support.

As the treatment consists principally in directing the form of the several parts, it must be continued for a period proportionate to the growth of bone: being thus necessarily very tedious, the surgeon has often difficulty in prevailing on the patient and her friends to persevere. If a girl is at school, and obliged to attend to the ordinary duties, or if she is indulged at home, little good can be done, and much time (very valuable to the patient) is lost. To show how much may be effected, even in four months, when the surgeon has the complete management and direction of the patient's occupations, I have had casts taken of the back of a girl, who was lately a patient in the Middlesex Hospital. In this instance the process of treatment was seen daily by my colleagues and by the pupils, and frequently by visitors. I was assisted in taking the casts by some of the pupils and one of the house surgeons; the first immediately on the patient's admission, the second on her being discharged from the hospital. They are deposited in Handel's Ward.

The case was very unfavourable, as the girl was of a short stinted form, and had menstruated for eighteen months previously to her entering into the hospital: however, in four months, she became nearly four inches taller, and the increase in her muscular power may be judged of by comparing the casts.

The variety in distortion is so extensive, and there are so many cases* in which little can be done, that I am induced to direct attention to the following questions, before a plan of treatment is decided on, or an opinion given as to the probable issue of a case.

As to the time the distortion was first observed:—Was it at an early age, or between eight and fourteen? Was it after one of the exanthematous disorders, as measles or scarlet fever? Did the change in the constitution take place early or late? Was it so late as the age of seventeen? Did the distortion seem to come on suddenly, and increase rapidly?

With regard to the nature of the curve of the spine:—Is it acute in some parts, or in a general waving line? Is the curvature between the shoulders to the right or left? Is the spine curved merely from side to side, or so twisted on its axis as to produce a prominence on one side of the spine and a sinking on the other? Is the distortion apparent above the first dorsal vertebra; or is the curve between the shoulders greater or less in proportion than that at the loins? Is any pain felt on pressure? What is the nature of this pain? Is there anchylosis of the vertebræ?

With regard to the condition of the ribs:—Is there an evident difference in the size of the two sides? Does this inequality disappear when the spine is elongated? Has the patient ever had a cough, attended with pain in the side that is diminished in size? Do the individual ribs appear mis-shapen? Does the sternum project; or is it flattened?

In regard to the question of the state of the constitution:—What was the condition of the health about the time of teething? Has the girl been of late listless, easily fatigued, and unwilling to take active exercise? Has the countenance that peculiar character which denotes deformity? Is the state of the skin or glands such as to mark a weak constitution? Are there any symptoms of infantile paralysis o blight? What was the condition of the wrists, knees, and ankles, during childhood? Are the limbs crooked or straight?

We should, moreover, attend to the general character and form of the patient; as in some instances the curve is rapidly improved, while in others the progress is exceedingly slow. The cases most difficult to manage, (excepting where a scrofulous action is distinctly going on,) are of two kinds. In the one the bones are very small, and the whole figure so diminutive as to be almost dwarfish: in such cases there is probably a degree of rickets. The other is quite opposite, and unfortunately is not uncommon: the girl has a heavy leucophlegmatic appearance, is square built, often round-shouldered, and strongly formed, but is at the same time so slow in her movements, and so torpid, that it is scarcely possible to induce her to do any thing with life or animation. It might be expected that the lower part of the spine in these girls would be sufficiently strong to support the chest and head, and that consequently distortion would not take place; yet it is not unfrequent. In these cases the ligaments of the spine also seem so much firmer than usual, that we can scarcely produce any effect by stretching.

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* Many of these varieties are described and illustrated by plates in my work on Distortion.

On the Treatment of Fractures of the Bones of the Lower Extremity; with a Description of an improved Apparatus for suspending the Limb. By William Chandler, Esq. Surgeon of the Kent and Canterbury Hospital.

To enter into a detail of the various methods which have been proposed by the most eminent men of the faculty, in this and in other countries, for keeping in apposition the fractured extremities of bones of the lower limbs, would be foreign to the purport of this communication; and equally so to combat the diversity of opinion existing on the best position for placing the limb.

On one point, however, all parties appear to concur,—viz. the absolute necessity of guarding against disturbance of the fractured bone, during the process of union. Amidst the infinity of plans which have been suggested to attain so desirable an event, the ingenious contrivance of a foreign surgeon has not sufficiently arrested the attention of the medical world. His proposal—that of suspending the limb during the progression of union, in cases of fracture of the lower extremities,—has for its avowed objects to expedite the cure, to afford the utmost attainable comfort to the patient, and to avert the calamities often ensuing from accidents of this nature.

I am indebted to my friend, Mr. George Young, for his communication of the favourable termination of such accidents, when treated according to a system advised by an eminent surgeon of one of the Swiss hospitals, whose name has escaped my recollection, but with whom success has been almost unvaried, even in most frightful cases.

If mechanical contrivance can be so adapted as to be the mean of mitigating the sufferings of those who are deprived by accident of the power of motion, and by its proper application of diminishing, if not totally precluding, the frequent appalling consecutive evils, it must be an object of the first consideration: nor should the mind be prejudiced against an invention, originating from whence it may. The object this Swiss surgeon had in view, when recommending the limb to be suspended in cases of fracture of the lower extremity, was to afford greater facility in the movement of the person whilst submitting to necessary operations, with the least possible disturbance to the limb;—to supersede extra assistance;—to allow of variation in the position of the body, without calling into action the muscles of the fractured extremity, or giving the slightest interruption to the fractured bones when once in a state of apposition; and consequently to render the patient exempt from the train of miseries attending nervous excitement, when the ends of the fractured bone cannot be preserved in a perfect state of adjustment by the ordinary mode of placing the limb, and to afford more ample means of attending to the comfort of the patient during the time of dressing wounds connected with, or in the vicinity of, the fracture, and in the change of linen, &c. &c.

The frame for suspending limbs, which I have used for the last four years, would appear, in many cases of fracture of the lower extremity, to possess decided advantages over the moveable bedstead of Mr. Earle; the weight, size, and expence of which renders its use inapplicable in many situations, and with the generality of persons in whom such accidents occur. On the contrary, the simplicity of the construction, portability, and cheapness of the suspending frame, of which a drawing is annexed, will allow of its application to any bed, and in any situation.

In all cases of fracture of the lower limb, in proportion to the extent of injury done to the bone and to the surrounding soft parts,—more especially in those of the compound, the oblique, and complicated kind,—will suspension be found of importance. Its chief value will be found in counteracting, as before stated, the causes which produce local disturbance, and subsequent constitutional irritation; as it ensures the perfect quietude of the limb, whilst its natural and easiest position can be guaranteed. In order to accomplish the important objects, splints varying in form and complexity have been introduced, and, by their judicious management, success has frequently been obtained. The least complicated form of these auxiliaries to the union of the bone will still be instrumental in the recovery of the patient; but I believe that splints of any description, however ingeniously invented and accurately applied, in many cases of compound fractures, or fractures giving rise to spasmodic action or great excitement of the system, will be held in the lowest estimation, unless their application be aided by some machinery or apparatus, which will secure the fractured bones from being displaced by more than ordinary action of the muscles. Suspension will accomplish this desideratum,—and the limb, being thus freed from the incumbrance and impediments offered by the bedding and clothing surrounding it, if placed in the usual mode, will be allowed such latitude of action as to enable the patient to shift his position without hazard to the fracture, or fear of exciting irritation; since no movement of the body can take place without the fractured limb being in corresponding action with it.

When the fractured limb, according to the usual method of arrangement, is made a fixture to the bed, one of the most perplexing consequences of the involuntary movements of the patient whilst lying, is that it slides from the pillow to the foot of the bed. Thus the upper portion of the bone forces the parts beneath the fracture onwards. If the lower part of the limb do not obey the impulse, the fractured extremities must be displaced, and present points of irritation to the surrounding muscles. In cases of fracture of the thigh-bone especially, the utmost caution is required to prevent muscular contraction from shortening the limb, by causing the ends of the os femoris to overlap. A provision will be found for these untoward occurrences in the suspending frame; and, by its use, events militating against symmetry of union, and which might produce dangerous or even fatal consequences, will be precluded.

In changing the position of the body, great relief will be given to the patient by the limb being thus suspended, as the muscles of the loins, thigh, and leg, will be relieved from the dead weight of the broken limb; whilst the muscular powers of the opposite side will act in concert with those of the arms and hands. Motion in every direction will be made easy by the principle of action being transferred from the muscles of the fractured extremity to those more remotely situated; and the difficulties which have hitherto fettered the medical attendant in the administration of remedial means to combat the evils incident to these accidents, need no longer exist; for, I repeat, all apprehension of displacing the impacted bone may be banished when the limb is once suspended.

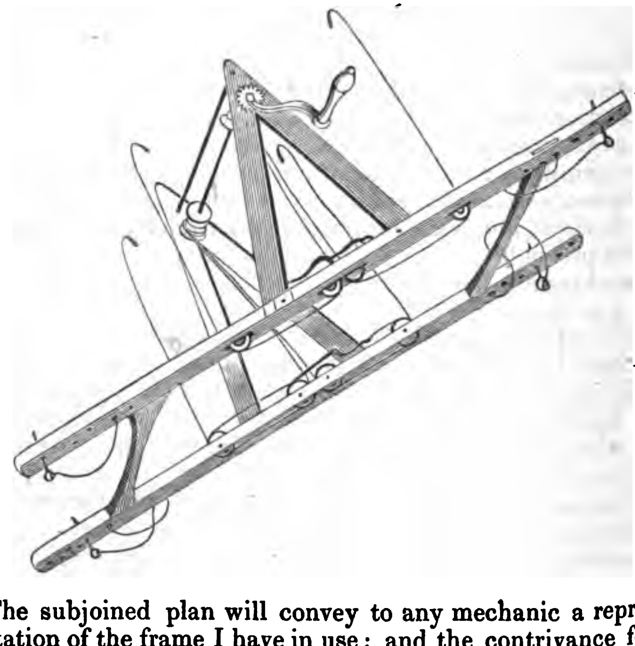
The height to which it may be necessary to support the limb by the frame, must vary according to circumstances:

generally about half an inch just clear from the bedding will be sufficient to allow the patient, in volition, to move higher or lower in the bed, as best suits his comforts.

In the removal of under-linen, or in the use of the night-pan, the limb may be raised to that height which is most convenient. Suspending the limb will not interfere with the ordinary mode of disposing the limb, nor with the apparatus considered most efficient.

In cases of disease of the hip, knee, and ankle-joints, where perfect rest is often one of the most salutary measures, the application of the suspending frame will not be less advantageous than in those cases to which I have now more particularly referred.

A frame for the convenience of patients must, in the construction, in some measure depend on the form of the top of the bed. That which has been most convenient in my public and private practice was planned to suit the iron bedsteads of the Kent and Canterbury Hospital; but the frame can be equally well supported by four uprights of common deal wood, with two rails or cross bars on the top, on which it may rest.



The subjoined plan will convey to any mechanic a representation of the frame I have in use; and the contrivance for suspending the lower limbs, in use at the Kent and Canterbury

Hospital, consists of a frame made of beech, three feet six inches in length, with four brass pulleys in each side: at the extremity pin-holes are bored, for the insertion of iron or brass pins, to secure the frame on the bed-top. Within eight inches of the frame, two rails, of twenty-three inches, are placed to connect it. Two side frames are screwed into the upper frame, of twenty-one inches in length, and brought to an angle at the bottom, through which is passed an iron rod, having two wooden pulleys or rollers, into which four green lines are inserted, with hooks at the extremity, by which the fracture-box is to be attached and suspended. At one end of the iron rod is a handle of wood, with a turning notch, and iron stop in the side frame: by means of this rod, the fracture-box may be raised or lowered at pleasure. At the end of the angular frame an iron rod is bolted, for making the lower part of the apparatus secure.

Canterbury; September 9th, 1826.

WOUNDED ARTERIES.

Cases of Wounded and Diseased Arteries, treated principally at St. Thomas's Hospital, *by* B. Travers, Esq. F.R.S.

The following are short notes of cases of wounded or diseased arteries. I shall not detail such as are either of ordinary occurrence, or present no peculiar circumstance in their history, symptoms, or treatment. Of the latter a considerable proportion has fallen to my share; but the case of femoral or popliteal aneurism is so familiar, and the operation which constitutes its cure so well established and successful, that the repetition of the narrative would be an useless tax upon the reader's patience.

Case I. *of Tumor, supposed to be Aneurism, spontaneously cured.*

May 17th, 1817.— —— Hallett, æt. thirty, a tailor, of healthy appearance. About three weeks prior to this date, the day after a very long walk, he perceived a swelling in the right ham, which has gradually increased in size, and at first had a distinct, and even strong pulsation. The tumor is defined, but nearly fills the popliteal space, and has the character of aneurism, excepting that the pulsation is obscure. There is stiffness and pain in the part, and he cannot extend the leg. The joint is in no degree affected, nor has he a swelling in any other part of his body.

June 1st.—Since his admission and confinement in a horizontal posture, the tumor has contracted in its dimensions, and become firmer; not the slightest pulsation is perceptible, and the almost complete extension of the limb can be performed. No application whatever has been made since his admission. The man describes the change to be such as confirms the belief that the tumor was aneurismal.

A soap plaster was applied to the ham, and the whole extremity bound with rollers from the instep to the hip.

Within a month the man left the hospital free from lameness, and with scarce a vestige of the tumor. He promised to return in the event of any alteration, but did not again present himself.

This might, or might not, be aneurism. It presented the external character of that disease, and certainly not that of bursal, glandular, or cellular tumor. The pulsation at the time of the man's admission was not strong enough to be pronounced, direct. He stated that it was much weaker than it had been. The contraction of the swelling was uniform, or, on its whole circumference, not broken; and the tension was exchanged for a greater density. It was believed by those who examined it to be aneurism. If not, it may fairly be asked, what was it?

CASE II. *Blood Tumor, from an ulcerated Opening of the Femoral Artery, which proved fatal.*

A stout man, of middle age, was admitted under the late Mr. CHANDLER, into St. Thomas's Hospital, with a diffused deep-seated swelling of the thigh, of great size and tension, but without pulsation or any original character of aneurism. It was reported to have increased rapidly of late. Shortly after his admission, while the history and treatment of the case were under deliberation, he died suddenly in the night.

The dissection of the limb showed that an opening in the femoral artery had permitted the escape of blood, by repeated issues, to such extent as to occasion the enormous increase of the swelling, and ultimately the fatal syncope. Lamellated coagula formed the walls of the tumor, but there was no vestige of a sac.

Since this case occurred, I have felt jealous of swellings which, void of pulsation, have had the character of spurious aneurism, from the depth, diffusedness, and tension of the swelling; which are, in fact, such as to disfigure the whole limb from joint to joint. The following case is in point.

CASE III. *of Blood Tumor, from an Ulcerated Opening in the Popliteal Artery, diffused over the greater part of the Thigh; for which Amputation was performed immediately below the Trochanter Minor.*

Richard Durrant, a farmer's labourer, æt. forty-five, was admitted into St. Thomas's Hospital, on September 1st, 1825, with a tumor occupying the lower three-fifths of the right thigh, most considerable on the inner side, rising on each side of the femur, leaving a central depression, as if confined by the attachments of the fascia to the ridges running from the linea aspera to the condyles. The integuments covering the tumor are very much discoloured and desquamating; and at the upper and inner part are two small openings, from which a sanious fluid is discharged. The foot and leg are much swollen and œdematous, and the cuticle peels off as if the limb had suffered from an attack of erysipelas. The man's countenance is pallid and haggard, and his lips are perfectly bloodless.

To the inquiries made concerning the origin of the disease, he gave very confused and incoherent replies, from which the following account was collected:—About nine weeks since, he was engaged in mowing grass, and, his shoes being unsound, he took cold; his feet inflamed, and a number of red spots appeared on his legs. A few days after this, while sitting before the fire, he felt something give way and trickle down his right thigh, and, but for immediate support, would have fallen to the ground. The swelling then began: he is certain it took place from below upwards, but is not quite clear whether the leg or thigh was first swollen. When asked as to pulsation, he at first said there was none; but afterwards corrected himself. There is at this time no fluctuation in the tumor; but a sufficient degree of elasticity to throw considerable doubt on the nature of the case; some supposing it to be an abscess following erysipelas, others diffused aneurism of the femoral artery. Mr. Travers gave his opinion that it was either diffused aneurism, or a tumor of the malignant fungoid species.

Sept. 2d.—℞. Ol. Ricini ℥ ss. statim sumend.

A probe introduced at the openings passed freely in every direction, and, when withdrawn, was followed by a sanious discharge unmixed with pus. In the evening, at least a pint of dark-coloured blood escaped from the openings; but further hemorrhage was readily suppressed. This occurrence led to the determination of operating early.

3d.—Doubts being still entertained as to the nature of the tumor, it was resolved to puncture it, and, if blood only escaped from the aperture, to proceed to amputate immediately. A scalpel was therefore plunged into the centre of the swelling, and, the finger being introduced at the opening, a quantity of grumous blood was discharged. The limb was then amputated, Mr. Key commanding the artery at the groin. Flaps were formed from the outer and inner sides of the thigh, and the bone sawn through immediately below the trochanter minor. The femoral, profunda, and superior perforating arteries required ligatures. Not more than one or two ounces of arterial blood were lost during the operation. The flaps, when brought together, formed a tolerably even line of union, about nine inches long.

On examination, the tumor was found to consist of coagulated blood diffused among the muscles of the thigh, which were much discoloured and partially disorganised. In one part of the tumor suppuration had commenced. In the centre of the popliteal space was an opening in the artery, half an inch long, of an elliptical oval shape, the edges being rounded off by ulceration. No traces of an aneurismal sac could be found.

Sept. 4th.—Passed a bad night. Extreme restlessness, and spasm of the stump; fever; furred tongue; quick, small pulse; frequent vomiting; cough rather troublesome.

℞. Haust. Salin. Effervesc. c. Tr. Opii m. v. quartis horis sumend.—Sago and Syrup.

The above unpleasant symptoms soon subsided, leaving him in a state of great debility.

From his wife, who visited the hospital to-day, we learned that, while sitting in his chair, on the first attack of the disease, he cried out, became very pale, and fell down fainting. The thigh suddenly swelled enormously, so as render it necessary to cut off his clothes. She described the pulsation by raising and depressing her hand quickly. After two or three days, the pulsation ceased as the swelling increased.

7th.—The wound partially dressed: the upper third has united by adhesion; healthy suppuration in moderate quantity.

9th.—℞. Dec. Cinch. c. Tr. ter die.—Vin. Rub. ℥ iij. indies.—Mutton-broth. A sinus is forming at the inner side of the stump.

14th.—The two lower ligatures came away. The stump is healthy, and healing rapidly; health improving; has a tolerable appetite; bowels regular.

Mutton-chop three times a-week; Porter ℔j. daily.

18th.—The last ligature came away. Wound healing rapidly. By the aid of compresses, the sinus is nearly obliterated.

28th.—Wound rather indolent, though much progress has been made; general health not quite so good.

℞. Quininæ Sulph. gr. ij. ex Infusi Rosæ ℥ j. ter die.—Applicetur vulneri Lotio Zinci. Sulphat.

October 3d.—Wound healed, except at the space left for the escape of pus from the sinus: here cicatrisation is rapidly proceeding.

15th.—Wooden leg. A few days afterwards he left the hospital quite well, and able to use his wooden leg with tolerable advantage.

The above was a case of much interest. In the case of bursten artery or aneurismal sac, which becomes in reality a blood tumor, amputation is commonly the only resource. Gangrene of the entire limb would, I imagine, be the inevitable result of applying a ligature upon the main artery of a limb laden with such a mass of unorganisable coagulum and disorganised structure. But, if this course were resolved upon, the best practice would be to lay open the tumor by incision, clear out the coagula, and tie the artery above and below the rupture, as in the old operation for aneurism.

(To be continued.)

TUMOR IN THE SPERMATIC CHORD.

Account of a Case, in which a Tumor in the Spermatic Chord was complicated with Symptoms so strongly resembling those of Incarcerated Bubonocele, as to lead to an Operation, by which the true Nature of the Disease was ascertained. Treated at St. George's Hospital, by Henry Jeffreys, Esq.

Cases have not unfrequently occurred where another disease has been mistaken for strangulated hernia, and an operation performed for the relief of the symptoms. The most common of these has been where an enlarged absorbent gland has existed in the usual situation of rupture,—or where there has been an encysted hydrocele in the upper part of the spermatic chord,—or where the testicle has been stopped at the ring of the external oblique muscle, in its descent into the scrotum. But I do not, at this moment, recollect an instance on record exactly similar to that which forms the subject of the following history.

Philip Haplin, forty-one years of age, was admitted into St. George's Hospital, in the evening of Wednesday, December 27th, 1826, with a tumor in the left groin, accompanied by symptoms resembling those of strangulated hernia.

He said, he was a watchman, and that, on his return home on Saturday morning, December 23d, he was suddenly seized with violent pain in the belly, followed by continued nausea, having had no stool for two days before. The pain was referred principally to the navel, and the lower part of the abdomen. By the direction of a medical gentleman in the neighbourhood, who visited him, he took some pills and aperient medicine, but without any effect. On Sunday he was bled in the arm, and took more purging medicine. On Monday he was still no better, and the bleeding and purgatives were repeated. On Tuesday he observed a swelling in the left groin, and was immediately impressed with the idea that he was ruptured. In the evening of that day he had four or five watery, purging stools, but they were not followed by any material remission of the symptoms. The next morning (Wednesday) he showed the swelling in the groin to the gentleman in attendance, who confirmed his opinion of its being a rupture. The surgeon told him that he had reduced it; and, by his desire, the man walked from his residence in Chelsea to the Strand, for a truss. On his return home, he was unable to bear the pressure of the instrument: the pain and distress in the belly, together with the sickness and vomiting, became much increased; and the swelling was larger and more painful; on which account the surgeon advised that he should be immediately conveyed to the hospital. On his arrival there, the taxis was again tried, but without success. He was then put into the hot bath, and, while there, thirty-two ounces of blood were taken from his arm, when he became faint, and in that condition the house surgeon again attempted the reduction of the swelling, but with no better success than before; and I was therefore sent for.

It was between nine and ten o'clock when I got to the hospital. Upon examination, I found a tumor in the left groin, about the size of a large walnut, protruding from within the ring of the external oblique, which looked and felt, in all its apparent characters, like a strangulated bubonocele. It was firm, tense, and very painful and tender when pressed. Its anterior or projecting surface was perfectly distinct and circumscribed, and its base fixed and immoveable. The spermatic chord, from the tumor to the testicle, was free and natural. The slightest pressure excited great pain in the tumor, and increased the distress and sickness in the belly, which was swollen and distended. The man had vomited several times since his admission; appeared to be in great agony; and had a very distressed, anxious countenance. He declared positively that he had never had a swelling in that part before, and that it had become larger, and infinitely more painful, since his walk that morning to the Strand and back. I endeavoured for some time to reduce the swelling by gentle and continued pressure, but to no purpose; and therefore proceeded to the operation, as the only remaining alternative.

Upon cutting through the sheath of the chord, and dividing the fibres of the cremaster muscle, there turned out a loose elastic substance, which appeared to consist entirely of cellular membrane, and was as large as a pigeon's egg. Under the upper part of this mass, coming out from the ring, a firm white tumor, of the size of a large Spanish olive, was exposed, which was imbedded in and closely attached to the substance of the chord. It had no resemblance to a recent hernial sac, nor to the pellucid membrane of an encysted hydrocele, but was tough and thick. When cut into, about a drachm and a half of clear water escaped; and it was then perceived to consist of a cyst, the parietes of which were nearly as thick as a half-crown. Its internal surface was smooth, and formed into little sacs or pouches; and it passed up nearly half an inch within the ring, but it had no communication whatever with the abdomen. As it could not be dissected out without slitting up the ring, and at the risk of injuring some of the vessels of the chord, I laid it freely open, and, having first satisfied myself that nothing like hernia existed in any part of the inguinal canal, put some lint lightly into its cavity, and brought the upper and lower parts of the wound gently together with sutures and sticking plaster. The man was then put to bed; and, as he complained of great pain in the wound and in the belly, he had forty drops of laudanum; and was afterwards directed to take two drachms of Epsom salts, dissolved in peppermint water, every three or four hours, till stools should be obtained.

He vomited only twice after the operation: the pain in the belly then began to remit; and, in the course of the morning of the 28th, he voided four or five large purging stools, full of scybala; and could bear pressure on the abdomen without flinching. A considerable degree of swelling had already come upon the chord, which extended up within the ring and down to the testicle, and filled up all that side of the scrotum. The integuments over it were red and inflamed, and it was tender and painful when touched. His pulse was full and strong, beating 108 in the minute; and his tongue was white and furred.

Blood was taken away from his arm; and he was ordered to take a saline draught every four hours, containing half a drachm of Vinum Antimonii Tartarizati, and as much Sulphate of Magnesia.

December 29th.—He had passed plenty of purging stools, and the pain in the belly and sickness had entirely subsided. But he complained of a good deal of pain and tenderness in the chord and scrotum, the swelling of which was increased to the thickness of a man's wrist, and was tense and hard. He complained also of a troublesome cough, with an abundant expectoration of muco-puriform matter, which, he said, he had been affected with for some weeks. Tongue rather dry; pulse 108.

The sutures were cut away from the wound. Twenty leeches were directed to be applied to the swelling, and afterwards a large bread-and-water poultice, and a suspensory bandage; and the draughts to be continued.

The next day, December 30th, ten more leeches were applied. On the 31st, a healthy suppuration was established, and the lint came away from the cavity of the cyst. The swelling, pain, and tension of the chord and scrotum were much reduced; he had a clean tongue; open bowels; and his pulse was reduced to eighty-eight in a minute.

From this time nothing occurred to retard his recovery: the swelling rapidly diminished; the discharge was moderate and good; the wound filled up with healthy granulations, and on the 30th of January it was entirely healed, a very slight degree of thickening only remaining where the cyst had existed.

The close resemblance which the tumor in this case bore, in all its apparent characters, to strangulated bubonocele,—the duration and increasing severity of the symptoms,—and the total failure of the remedies already tried, left no other resource but the operation to propose: indeed, to have delayed it under such pressing circumstances would have been inexcusable. No part, however, of the relief obtained can be attributed to the operation. The complaint in the bowels was clearly obstruction and inflammation, brought on by previous constipation; which were subdued by the copious bleeding, warm bath, and other means made use of after the patient's admission into the hospital. The tumor in the groin had probably existed for some time. The man discovered it by accident, and, combining it with his other symptoms, naturally conceived that he was ruptured. The rude and ineffectual attempts to push it up into the belly, excited pain and swelling of the part, and thus rendered its resemblance to hernia more remarkable. Had the true nature of the swelling been ascertained, a better mode of treating it could not, perhaps, have been proposed than that which was adopted and proved successful,—viz. the laying it fairly open by a simple incision. The case, being one of rare occurrence, is altogether highly interesting, and its result very satisfactory.

5, Arlington-street; February 1st, 1827.

CHOREA.

Fatal Case of Chorea, treated at the MIDDLESEX HOSPITAL, *by* DR. HAWKINS.

ELIZABETH SMITH, aged seventeen, was admitted into the hospital on the 5th September, 1826. It was stated by her friends, that seven weeks previously she had suffered from a severe attack of rheumatism, chiefly in her knees and shoulders. This had got better; but a fortnight ago she was seized with involuntary convulsive motions, affecting the muscles of the legs and arms, and neck. These had continued ever since, with extreme violence. The catamenial discharge had formerly made its appearance, but had been suppressed for four months. She complained of headache, thirst, and pain in her back. Pulse ninety-six; tongue foul; bowels costive.

A full but unsuccessful trial was in this case made of the purgative plan of Dr. HAMILTON. The patient had repeated doses of Calomel, Senna, or Jalap; and an enema of Oil of Turpentine was three times administered. These measures never failed to bring away copious and dark-coloured evacuations, but they procured not the smallest alleviation of the convulsive spasms, which resembled those with which hydrophobia exhausts its victim. It seemed impossible for the patient to hold her head still for a single instant; and the grinding of the teeth was so violent as at last to force out the incisores from the lower jaw. The convulsions continued without any remission, except during some short intervals of broken and interrupted sleep. The patient's articulation was rendered difficult, but never entirely stopped; and her consciousness did not appear to be at any time impaired.

On the second night after her admission, she was ordered to be put into a warm bath, with the hope of bringing on the catamenial discharge; but this measure unfortunately aggravated the convulsions, and produced such an accession of irritation, and even of inflammatory symptoms, that it was deemed necessary to take from her sixteen ounces of blood. The blood drawn presented an inflammatory appearance. The bleeding was repeated on the following day, but was succeeded by very little alleviation of the spasms.

After the failure of purgative medicines, a short trial was given to Musk, but it produced no effect upon the symptoms. Some pills, consisting of three grains of Camphor and one of Opium, succeeded in procuring sleep. After the second administration of these remedies, she slept soundly; but upon waking she sunk gradually, and expired on the morning of the 13th September (the sixth day after her admission), apparently exhausted by the violence and long continuance of the spasms.

Upon examination after death, no morbid appearance was discovered within the cranium. The duplicatures of the pleura adhered firmly together. In the upper part of the lungs there were a few tubercles of a large size, and several earthy concretions were deposited in various parts. Adhesions were also formed between the external membrane of the liver and the surrounding portions of the peritoneum. The intestines were healthy in appearance. The omentum and mesentery were studded wlth numerous cysts; some containing a black semi-fluid matter, others containing calcareous depositions. Several large concretions of the same kind were found in the substance of the pancreas. The uterus was somewhat large and vascular, and the mucous lining of its body and fundus were highly injected. The neck of the uterus contained a little gelatinous matter; by which, however, it did not appear to be completely closed. The fallopian tubes and ovaries contained a good deal of the black matter which has been before described. There were also some small vesicles, of a whitish colour, within the ovaries; but there did not appear to be any distinct corpus luteum.

The foregoing case has been detailed for the sake of preserving an account of the examination after death. Chorea, having seldom occurred with such extreme violence, has seldom had a fatal termination. An examination, therefore, of morbid appearances after such an event must be interesting to the pathologist, on account of its rarity. There are no cases of this disease to be met with in MORGAGNI. LIEUTAUD has a section on the morbid appearances observed after fatal cases of convulsions; as likewise after some cases of hysteria and of chlorosis. But there are none of these which exactly correspond with the case which has been described.

It has generally been supposed that irritation of the brain or nervous system is the proximate cause of chorea. Sufficient cause for such irritation was met with in the preceding case. But a question might arise, whether it were chiefly caused by the numerous earthy concretions, which might have served to irritate the nerves of all the abdominal viscera; or whether from the highly excited state of the uterine system.

The German writers have drawn a distinction between what they have termed the German or great St. Vitus's dance, and the minor St. Vitus's dance, or chorea of the English. The foregoing case did not coincide in its symptoms with either the one or the other, as they have been described by these authors. The convulsions were far more violent than are common in the latter; and they wanted the regular paroxysms and intermissions which have been attributed to the former.

The foregoing case was said to be preceded by a severe attack of rheumatism. It is worthy of remark, that rheumatic pains are said to attend the commencement of each of the cases which Dr. Hamilton, in his observations on Chorea, has cited from STOLL'S Rat. Medendi. These cases were severe, and, after the failure of stimulant and antispasmodic medicines, were ultimately cured by purgatives. It is a question whether the muscular pains complained of in such instances were really rheumatic; or whether they might not have arisen from nervous irritation, or from whatever else might have been the proximate cause of the subsequent spasms.

INJURIES OF THE HEAD.

Cases of Injuries of the Head, treated at the MIDDLESEX HOSPITAL.*

(Continued from page 117.)

IT will no doubt be remarked, that those injuries of the head which have been denominated concussion and compression of the brain have many symptoms which are common to both. Indeed, as we have been considering these symptoms as arising in either instance from the same cause, the diagnosis in the early stage of such injuries must obviously be difficult. It cannot have escaped notice how ill the system, in these cases, bears the large abstraction of blood; and that it requires the utmost care, and the most mature judgment on the part of the practitioner, so to employ this remedy that it may prove safe and beneficial to his patient. The preceding cases will show that it is the inflammation of the brain with which we have to contend, and that such inflammation cannot be treated after the same manner as the idiopathic inflammation of that organ. General blood-letting cannot be so freely employed, and then it is that local depletion becomes of the utmost value. The treatment of apoplexy seems to stand somewhat in the same relation; for modern experience has shown that the large blood-lettings, which were formerly employed in this disease, are far from proving beneficial. The causes of this difference has been alluded to in the cases of Todd and Spirit. It would appear that, when such an important organ as the brain is much injured, the powers of life will not allow of large abstractions of blood; so that our patient may even die of inflammation of the brain without its being in our power to arrest it. Then it is that mercury, and especially calomel, may be exhibited with the greatest advantage.

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* In the former part of this Paper, case of R. Smith, p. 113, line 3d, for "compression" read "concussion."

There is one other circumstance which we may mention whilst speaking of the effects of blood-letting in this class of cases. We must be careful not to carry our general depletion too far; for the pulse is very apt to sink rapidly, and this sinking of the pulse is not unfrequently followed by convulsions,—a condition from which possibly, or indeed probably, our patient may not again recover. But besides this, if, in attempting to remove that degree of chronic inflammation of the brain which so often remains to be combated in the latter part of our treatment, we deplete and weaken our patient too much, we shall find that such an irritable and weakened condition of the system may be induced as to become a means of keeping up and prolonging the disease; and that, for the removal of the disease still going on in the brain, it will be necessary, at the same time that we use local depletion and counter-irritation, to support the general powers of the constitution by a mild and nutritive diet. So important do these positions appear, that we shall add another case to illustrate them.

CASE IX. *Concussion of the Brain, accompanied by Compression or some local Injury of that Organ, causing Hemiplegia.* Treated by Mr. SHAW.

John Goodison, ætatis twenty-eight, was admitted into the Middlesex Hospital, December 21st, 1826. He had fallen from a music-cart, and pitched with his head upon the pavement. He had been drinking, and when brought here was senseless: he was pale and powerless, and his pulse was small; his head rested upon his shoulder, and his eyelids dropped. The pupils were dilated, and were but little influenced by the light; the *voluntary* muscles of the eyeball were inactive, the eyeball was turned up.

When placed in bed, he immediately huddled and packed himself up into a small space, drew the bedclothes over him, and evidently wished to be left alone. He was impatient if roused, and pulled his hand forcibly away when you took it to feel the pulse. He answered questions put to him in a loud tone of voice, but his answers were short and delivered in a peevish manner. His eyelids were closed; and, with apparent perverseness, he resisted any attempts to open them, by squeezing them forcibly together.

Two small wounds of the scalp were all the external appearances of injury which could be found. When we examined the wounds, he evinced great uneasiness, and raised his hands to his head, as if to prevent further examination.

He says that he is thirsty, and assists the nurse in guiding the jug to his mouth; but, as if conscious of his own inability to hold it, he desires the nurse "not to let it go altogether:" he drinks, and afterwards resumes his former position. He lies as it were in a placid slumber, and with tranquil breathing. The head was shaved, and covered with an evaporating lotion. As we could not get him to swallow, his tongue was touched with the croton-oil, and a laxative enema was administered. Twenty leeches were applied to the head.

22d.—Is in much the same condition. He is peevish when questioned, but his answers, though short, are extremely pertinent, and evince a good deal of wit and shrewdness. If not roused, he lies in a comatose state. He had risen twice in the night, got out of bed, passed his urine, and had a plentiful evacuation from the bowels. Either time he staggered to his bed, and crept under the clothes as before. He complains of pain in the head; his pulse is weak, and rather slower than natural.

23d.—The pulse had acquired more strength. He was bled to sixteen ounces, or until the pulse fell. The nape of the neck was blistered. The bowels were kept freely open with the house-medicine. There was no alteration in the general symptoms.

24th.—When roused, he appears to be more rational than he was yesterday. Shaking his head gives him pain; the pulse is fuller.

> Sixteen ounces of blood were abstracted from the temporal artery, and the following draught was ordered to be taken three times a-day:—H. Salin. ℥ij.; Vin. Antimon. Tart. ʒj.

After the bleeding he opened his eyes; became communicative, told us his name and occupation, gave us his hand, and, when desired, put out his tongue. He could not, however, remember any thing of the accident: indeed, he knew not that any had befallen him. At times again, as if his attention was fatigued, he would relapse into his former state of somnolency.

About four P.M. (nearly two hours after the bleeding,) he had several convulsive twitches, which lasted for a few minutes. These gradually assumed a more formidable character, until the whole of the left side of the body became somewhat affected. The pulse had remained weak ever since the bleeding, but now it became very feeble and fluttering. The house-surgeon, imagining that the bleeding had been carried too far for the injured condition of the brain, and finding that the powers of the circulation were fast failing, administered a diffusible stimulant, and carefully watched its effects on the pulse. After this the patient soon recovered, and in the evening appeared to be better than hitherto.

25th.—He is quite rational: he tells us how he has passed the night, and says that he cannot sleep. He drinks continually. Bowels torpid; pulse natural. The convulsions occurred again at night.

26th.—He complains of pain in the head; pulse ninety, and weak. Bowels to be freely opened with the house-medicine. The convulsions still continue; towards midnight they became very violent.

Sinapisms to be applied to the feet.

27th.—He has lost the power of moving the left arm and leg; he cannot retract the left cheek, nor can he forcibly close the eyelid. When asked to move his left hand, he lifts it with the right. The convulsive motions of the voluntary muscles are confined entirely to the paralysed side; but it is curious to observe that the spasmodic action of the respiratory muscles is equal on both sides. This shows well the combination of the respiratory muscles, and the indissoluble connexion which exists between the function of respiration on either side. He is almost constantly convulsed; the intervals are short, but perfect. The sweat stands upon his brow in large drops, and his body is drenched with perspiration. He is quite insensible during the fit. In the evening the pulse became full, and the carotids beat strongly. Eight ounces of blood were taken from the temporal artery: the pulse then began to faulter, and the bleeding was stopped.

A blister to be applied to the nape of the neck.

28th.—He is evidently worse: he faulters in his speech, and he passes his feces and urine in bed. The fits continue. The sinapisms had produced but little effect. The blistering iron was applied to the inside of the legs: this produced some irregular movements in the paralysed limb.

31st.—Has continued much the same since our last report. Yesterday he was convulsed for three hours, without any perceptible remission, and immediate fears for his life were entertained. To-day there is more excitement, and evidently more action in the vascular system of the brain.

Twelve leeches were applied to the head; and two grains of Calomel were ordered to be taken three times a-day.

January 2d.—He is much improved: he has partially recovered the use of his left arm and leg; he can now close the left eyelid firmly, and can draw the angles of the mouth to either side. His fits have been less frequent; he is far more rational; but he still passes his feces and urine in bed. Gums not affected.

10th.—The improvement in this man's condition since the first exhibition of the mercury, but especially since the system has been brought under its influence, is truly remarkable. The paralysis has been in a great measure removed, and the functions of the sensorium have been partially restored. He remains in a very irritable and weak condition, and continues to complain of pain in his head; and his other symptoms are indicative of some inflammation still existing in the brain. He was allowed a more nutritive diet.

This alteration in diet, together with a perseverance in counter-irritation, and a moderate use of mercury, proved highly beneficial, and led to a perfect cure.

[To be continued.]

VOMITING.

On the Inefficiency of the act of Vomiting in removing Arsenic from the Stomach. By JAMES SCOTT, Surgeon.

I WAS called, a short time ago, to Susan Walmer, a young woman, ætatis sixteen, residing at No. 5, William-street, Newington; the messenger informing me that she was labouring under violent pain of the stomach, suspected to arise from poison. I found her writhing under great torture, which she referred to the epigastric region; her tongue loaded with a thick buffy coat; her breathing quick and oppressed; her pulse imperceptible; her body cool, the extremities icy cold. She complained of a "burning heat" in the mouth, and a sensation of constriction of the fauces, (or "choking," as she termed it,) amounting almost to suffocation. Her thirst was insatiable, and she called incessantly for water. She had vomited severely for two hours, and her bowels had been frequently purged with dark and offensive motions. I asked her what she had taken? to which she replied, fifteen pennyworth of laudanum and half a teacupful of arsenic.

The matters she had vomited had not been preserved, and I had no means, therefore, of knowing what had been thrown up; but, aware of the extreme tenacity with which arsenic adheres to the mucous membrane of the stomach, I considered it my duty to cleanse this organ mechanically, notwithstanding the exhausted state of the patient indicated the probable approach of dissolution. Two quarts of warm water were injected with the stomach-pump, and withdrawn; when two quarts more were thrown in and withdrawn, in a similar manner. I was proceeding to inject a further quantity, when a change of the unhappy patient's countenance and appearance warned me that death was nearer at hand than the symptoms had at first foreboded. I therefore withdrew the tube, caused her to be laid into bed, and she expired ten minutes afterwards, having survived the fatal dose about six hours.

By an officious interference of some persons about me, the portion of fluid first withdrawn from the stomach had been thrown away; but, on inspecting that of the second operation, I discovered a pulverulent precipitate (which I subsequently ascertained to be arsenious acid); very inconsiderable in quantity however, amounting to a few grains only.

On the following morning I opened the abdomen, and, having put a ligature around the cardiac and pyloric extremities of the stomach, I separated the organ, and removed it to my house for examination. The inspection being undertaken rather with a view of furnishing evidence of the cause of the patient's death, than of tracing the morbid effects of the poison, and my leisure not allowing me an investigation further than was necessary to satisfy judicial inquiry, the result has not enabled me, probably, to furnish any new fact involved in the phenomena of poisoning by arsenic; my object in this communication being to engage professional attention to a striking fact, important in its relation to therapeutical agency.

The stomach, on being opened, was found to contain about twenty ounces of fluid, which had been injected previously to the death of the patient. Upon the removal of this fluid, the surface of the stomach presented universally a bright vermilion blush, with patches of a brownish red scattered here and there, but chiefly on the posterior lateral surface, in the pyloric half of the stomach. These patches were somewhat pulpy, rather loose in texture and adhesion, more glossy than the surrounding parts, and gelatinous in appearance. In fine, they were portions of the mucous membrane in a state of disorganisation, and might be detached by being pinched between the finger and thumb, leaving the muscular coat denuded. *Near the small extremity of the stomach, lay two masses of powdered arsenic, enveloped in a sort of reddish jelly,* which doubtless consisted of the mucous membrane disorganised by the contact of the poison. These were scraped off with a spoon, and the powder separated by repeated washing in cold water. I did not weigh it, but I should guess the quantity of arsenic to have been at least half an ounce.

Here is the point to which I would direct the attention of the medical practitioner. Vomiting, assisted by copious dilution, *during two hours,* had not detached the arsenical powder from the surface of the stomach; and so entangled and blended was it with the softened mucous membrane, that I believe no action of the organ itself could have separated it. The injection of a strong current of fluid, by means of Read's stomach-syringe, failed also to detach the mineral: so small, indeed, was the portion of arsenic washed up with the liquid, that, as I remarked before, only a few grains subsided in the vessel in which it was received and allowed to rest; and the chemical tests which I employed gave but very faint traces of arsenic in solution: the sparing solubility of arsenic in water may account, probably, for the latter circumstance.

From these facts, I think that the following conclusion may be adduced: —That the efficacy of emetics in dislodging arsenic from the stomach is confined to a limited time after the poison has been swallowed; but what may be its extent, or at what period the disorganisation of the stomach commences, which agglutinates and fixes the mineral to the surface of the organ, I have not had sufficient experience to ascertain; it being probably determined by the quantity swallowed, by the quality and volume of ingesta, and perhaps by other accidental circumstances.

In the present case, the stomach contained no solid matters, the patient having eaten no food through the day.

In the absence of positive information upon this point, would it not be the safest practice to resort at once to the use of the stomach-pump in these cases? As an indirect reply, I must be allowed to express my conviction that, had I been earlier in attendance upon this unfortunate person, (such is the force of the fluid propelled by the syringe I employed, a power which gives it a distinguishing superiority to any other,) I should have used it successfully. And here I will take leave to notice an opinion that has been given of the inexpediency of the pump in emptying the stomach, from a notion that the operation might be performed by a tube only, upon the syphonic principle: the case I have related is a sufficient commentary upon such a tenet.

I have to state in conclusion, that I ascertained the poisonous substance to be arsenic by a concurrence of all the tests which were employed, as lime-water, nitrate of silver, ammoniuret of copper; and, lastly, by its reduction to a metallic state.

30, *Newington Causeway, Borough;*
August 1826.

CRITICAL ANALYSES.

Quæ laudanda forent, et quæ culpanda, vicissim
Illa, prius, cretâ; mox hæc, carbone, *notamus*.—Persius.

Appendix to the Papers on the Nerves, republished from the Royal Society's Transactions, by Charles Bell: *containing Consultations and Cases illustrative of the Facts announced in these Papers.*—8vo. Longman and Co. London.

Since the announcement in the Philosophical Transactions of these discoveries, we have promulgated them by such means as were in our power, because we foresaw that they would claim the attention of the profession in all countries; and we have now the satisfaction of thinking that we were among the first, if not the very first, to proclaim their importance.

If we look back to the labours of preceding physiologists on the Nervous System, we shall find that little was accomplished by them, in ascertaining with precision the distinct functions of individual nerves. Hence the classification of nervous disorders by systematic authors have been unsatisfactory, being formed in ignorance of the uses of the nerves. For the same reason, physicians have hesitated to confide in their knowledge of the nerves, while attempting to discriminate between diseases; and this department of anatomy has generally been shunned as being too obscure to afford a hope that practical benefits could be derived from its study. But a more favourable prospect has been held out to us for some time, by the views of our author. The Cases and Observations which are before us, in addition to those already published, afford many proofs of the advantages which have resulted from his investigations.

The first set of Cases are illustrative of the first paper read before the Royal Society, wherein it was shown that the fifth pair of nerves bestows sensibility to the head, and power of motion to the muscles of the jaws; and that the portio dura controls the actions of certain muscles of the face, and is connected in a particular manner with the functions of respiration. It was also shown that these two nerves belong to distinct classes.

It may, perhaps, be recollected by our readers that Mr. Bell selected these as the subjects of his first paper, in order to exhibit the distinctions between nerves supplying the same parts. He stated, that he despaired of exciting attention to the distinction in the nerves of the throat and chest, from those parts being more complicated in their anatomy and the number of their functions. We have a proof in this Appendix of the correctness of the author's view of this matter; for we find all the cases which have been supplied by others are of affections of the nerves of the face: the cases of disorders in the nerves of the neck and chest are from his own observation. He expresses his conviction, however, that, when practitioners shall have a distinct knowledge of the anatomy of the respiratory nerves, cases illustrative of their functions will accumulate.

We have attended from time to time Mr. Bell's Lectures upon the Nervous System, both at Windmill-street and at the College of Surgeons, and we must confess that the subject has appeared to possess still more interest, and to be more easily comprehended, in his Lectures than in his Essays. The course of observations by which he was led to distinguish the nerves into classes, appears to have been this:—Viewing the regularity with which certain nerves arise from continued tracts of nervous matter, and contrasting with these the irregularity of others, he endeavoured to ascertain, by experiments on the roots of the spinal nerves, whether those nerves which arise from the same tracts possess similar endowments. He proved that the anterior roots bestow muscular motion; and, tracing upwards the column of medullary matter from which these anterior roots arise, he observed the ninth pair, the sixth, and the third, coming as it were from the same nervous tract. The distribution of these proved to him that they also are motor nerves. Having in his experiments divided the roots of the spinal nerves, and satisfied himself that the anterior bestow the power of motion, he was at the same time convinced that sensibility resulted from the posterior roots; because he observed that there was no convulsion of the muscles when they were irritated. But the violence necessarily used in making these experiments prevented him from judging of the degree of sensibility which remained after having cut the posterior roots. Besides, it was then the commonly received opinion that nerves with ganglia upon them are insensible. Considering himself compelled to prove more satisfactorily to others this important fact—that nerves with ganglia may possess sensibility, he turned his attention to the head, in order to find which was the nerve of sensation there. He found the fifth pair, which has a ganglion on one of its roots, and is almost universally distributed over the head. There is also another nerve—viz. the portio dura, supplying a considerable portion of the head, but it has no ganglion at its origin. The question to be decided, therefore, was, which of these two nerves bestowed sensibility?—whether the fifth pair, which has a ganglion, or the portio dura, which has not? Before venturing to make any experiment, he contemplated the subject, through the medium of anatomy, still more closely, and he perceived that the fifth pair corresponded with the nerves of the spine: it resembled them in having two roots, and a ganglion upon one of them. If, then, his conjecture was correct, this nerve must be of a compound nature: the source of sensibility to the head, and also a nerve bestowing voluntary motion.

The question now arose, what might be the use of the portio dura, which went to some of the parts which were already supplied by the fifth pair? In what respects are the muscles of the face peculiar, that they should possess this additional nerve, differing from the fifth pair in its anatomical character? He studied the muscles of the face with great care, and discovered that they have many peculiarities: in particular, that they are related very closely with the operations of the organ of respiration. He remarked that the portio dura arises at a distance, and takes a circuitous course to the muscles, (in which it differs from the spinal nerves, or fifth pair, whose branches pass directly to their destination,) and that its origin is close to that of the great nerve, which supplies the lungs.

He observed a similar peculiarity in the course and distribution of another nerve,—viz. the spinal accessory; the roots of which arise from the cervical portion of the spinal marrow, and the distribution of which is to the sterno-cleido-mastoideus and trapezius: yet it does not, like the common cervical nerves, take a transverse short course to these muscles; but it rises in the first place into the skull, that it may emerge from it again in connexion with the nerve of the lungs. Examining now the actions of those muscles on which the spinal accessory is distributed, he discovered that, besides possessing the usual actions of voluntary muscles, they are combined in a peculiar manner with the apparatus of breathing. Thus, by viewing the anatomy without having recourse to experiments, which, if made prematurely, might have disturbed his course of reasoning, he was led to consider that the fifth pair is the spinal nerve of the head, and that the portio dura commands certain actions of the muscles of the face, which are particularly connected with respiration.

The experiments on the fifth nerve and the portio dura have proved that his views of the functions of these nerves were correct. When the fifth pair was divided, sensibility was destroyed; thus proving that a ganglionic nerve possesses sensibility, and also removing any doubt of the posterior roots of the spinal nerves being capable of bestowing sensation. It was likewise proved, by irritating and dividing this nerve, that it regulates the motions of the jaws.

Thus our author succeeded in proving that, in its origin, distribution, and function, the fifth pair resembles the nerves of the spine; and it may be perceived how much assistance this afforded him in ascertaining precisely the functions of the other nerves. He experimented on the portio dura, and then upon the spinal accessory; and the results confirmed him in his opinion that they were connected with the organ of respiration, and superadded for this peculiar purpose. Afterwards he was enabled to add other nerves to this particular class.

It is not our intention to enter upon the arguments by which he has supported these views; but we observe that the idea of his classification originated from having first discovered the functions of the roots of the spinal nerves, and we find that he applied to the portio dura the name *respiratory nerve of the face,* after having ascertained that the fifth pair resembles the spinal nerves. It was from having discovered that there is a "symmetrical" system of nerves, including those of the spine and the fifth pair, common to all creatures, whatever may be the apparatus by which their respiration is performed, that he was led to investigate the organ of respiration in man and other animals, to ascertain the functions of certain other nerves, which are "irregular."

Our author has repeatedly asserted that he owes these views to anatomical, rather than to experimental investigations. In this Appendix he supplies us with several instances of the want of success attending the researches of those who are mere experimenters, even when they have had an opportunity of seeing the phenomena on the human body. After relating a case in which it was proposed to Mr. Bell that he should divide the portio dura, he states what would have been the consequences of such an operation: "His eye would have remained open; for the attollens palpebræ being supplied by the third nerve, and the orbicularis palpebrarum by the seventh, the cutting of the latter would have paralysed the eyelids; they would have remained open, the eye would have become inflamed, and probably opaque; there would have been greater deformity, and blindness to boot." An eminent surgeon in London, (p. 67,) as well as Mr. JOHN BELL and others, have extirpated tumors from the angle of the jaw, and thus divided the portio dura: paralysis of the muscles of the face was the consequence in all these instances. Again, surgeons have frequently divided the branches of the fifth pair for tic douloureux, and no paralysis of the muscles has resulted from these operations. Mr. Bell is thus led to remark, "that if the portio dura has been repeatedly cut, and also the branches of the fifth pair, without a conception arising in the operator's mind of the functions of these nerves, it brings us forcibly to the conclusion that it is through the knowledge of the anatomy, and not by what is termed experience, that we are to obtain correct notions of the functions of parts, and more especially of the nerves." It would appear that Mr. Bell has not consulted Dr. DARWIN's Zoonomia, for we find there a striking illustration of his opinion. A gentleman, having tic douloureux, was under the care of three eminent practitioners—Dr. Darwin, Mr. Cruickshanks, and Mr. Thomas. Nine incisions, "together with some smaller ones," were made on the left side of his face: every nerve of that side of the face, including branches of the fifth pair and the seventh, were divided, yet there is not one word concerning the defect of sensation or of motion: "he set out for Leicestershire perfectly restored."

In pursuing his investigations, we may perceive that our author has been led to his discoveries by adhering to the principle stated in his first paper,—viz. that "the nerves of the animal frame are complex in proportion to the variety of functions which the parts have to maintain." Being convinced that there is a coincidence between the number of nerves transmitted to an organ and the compound nature of its functions, he directed his first attempts to distinguish what are the different combinations into which the parts enter; then he reflected upon the origins and distribution of the various nerves, to ascertain which were most likely to bestow the separate endowments. His experiments have been resorted to, not as the direct means of discovery, but to verify conclusions drawn from the contemplation of the structure of the body. We regard the discovery of a new motion of the eye, which is frequently referred to in these "Cases," as affording a remarkable proof of the advantages of investigating the functions of parts by the study of their anatomy.

In many courses of his public lectures, Mr. Bell was accustomed to express his difficulties about the function of the fourth nerve: he used to hold out the attempt to discover its use as a good subject for his pupils on which to exercise their ingenuity. The train of observations by which he overcame the difficulty appears to have been nearly this: The question to be solved was the cause of the superior muscle being supplied by the fourth nerve. He contrasted the recti muscles, which are under the influence of the third, with the obliqui, one of which is supplied by a branch of the fifth and the other by the fourth nerve. He found that the recti are sufficient for performing all the voluntary movements of the eye; and he was of opinion that the obliqui are not adapted to act in association with the straight muscles, on account of the oblique direction of their attachments. He was thus induced to look for some other use for the oblique muscles. The circumstance of the fourth nerve arising at a distance near the portio dura, seemed to point out some connexion between the action of the superior oblique and the closing of the eyelids. The question then arose, is there any change in the position of the eye when the eyelids are closed? This admitted of an easy experiment: desiring a friend to attempt to shut his eyelids whilst he held them open with his fingers, he observed the cornea was tilted upwards. This position of the eye pointed out the action either of the superior rectus or of the inferior oblique muscle. He now made an experiment on the eye of a monkey: he cut through the insertion of the superior rectus, yet the eye rolled upwards whenever the animal was threatened; thus proving that the motion he observed was produced by the action of the inferior oblique muscle. He came finally to this conclusion, that, while the eye is under the control of the recti, the oblique muscles balance each other, the superior oblique being in a state of opposite action to the inferior: but this condition ceases when we wink, or when the eye is removed from the command of the voluntary muscles during insensibility, as in sleeping, fainting, &c.—then the superior oblique relaxes, and the inferior turns up the eye. This led him to comprehend why the fourth nerve (that of the superior oblique muscle,) does not arise from the nearer part of the brain, as the third, but is to be traced back to the point of origin of the seventh. He concluded that the eyelid and the eyeball sympathise in their motions by the relation of these nerves at their roots.

We have considered that it would be interesting to our readers thus to point out how these discoveries have resulted from examining and reasoning upon the anatomy. Our author has conducted his investigations by contemplating the structure of the body, and thence inferring the uses of the individual parts: afterwards he submitted his suggestions to the test of experiments, which on this account have been "few and simple."

Of the Cases in the Appendix there are nineteen, which illustrate affections of the portio dura. The following facts are pointed out by them: 1st. It is shown that practitioners have been alarmed with the apprehension of apoplexy, in cases where the paralysis has depended merely upon an affection of the portio dura. 2dly. That motion of the side of the face may be destroyed without the sensibility being diminished, or the motions of the jaw affected. 3dly. That cutting branches of the portio dura in operations upon the face is attended with distortion of the countenance, and perhaps blindness. 4thly. That suppuration within the ear, by affecting the portio dura, may produce paralysis. 5thly. That suppuration before the ear, and under the angle of the jaw, may be attended with similar consequences. 6thly. That paralysis of the face may occur from an accident by which the temporal bone is injured. 7thly. That, by pressure of tumors on the fifth pair, the sensibility of a part of the face may be lost; by pressure on the seventh pair, the motions of the muscles of the face may be destroyed. 8thly. When patients cannot close the eyelids, the eyeball may be seen revolving upwards when they make the attempt. 9thly. The cornea is observed permanently turned up during sleep. 10thly. The eyelids being paralysed, some patients employ the fingers to close them occasionally. 11thly. One patient, from paralysis of the muscles of his nostril, was obliged to pull it open with his finger in order to breathe freely. 12thly. The muscles of the face participate in spasmodic twitchings, which affected the muscles of inspiration.

A woman was seen during the violent efforts of labour, one side of her face remaining motionless; "and the countenance assumed a singularly ludicrous aspect."

A patient was seen dying: one side of the face continued placid, whilst the mouth and nostrils were convulsively pulled towards the other side, "producing a frightful expression of countenance."

At p. 34, there is a case of paralysis of all the voluntary muscles of the eyeball, except the abducens. The eye was seen to roll up during the act of winking. This is followed by a note referring to an incessant tremulous motion of the eye, in a patient who had lost one of his eyes, and had an opaque spot on the cornea of the other. He was insensible of this movement of the eye, and saw objects naturally and at rest. Mr. Bell asks, "was this a defect arising from disorder of the nerves, or an accommodated action to the opacity of the centre of the cornea?" We have seen a case precisely similar to the above: A girl, named Sophia Walker, æt. seventeen, has an incessant motion in both her eyes. She lost her left eye during infancy: it is now shrunk. On the inside of the cornea of the right eye, there is a leucomatous spot, nearly opposite the pupil: the iris adheres to the cornea at this part. The motion of the eye is from angle to angle, and is performed rapidly and incessantly. Her mother says it has continued so ever since her infancy. The girl is unconscious of her eye moving: when she looks at an object, whether near or at a distance, the object appears at rest; she can thread her needle easily. When she reads, there is no cessation of the motion; when she looks at her face in the glass, she can see her eye moving. When asked to strain to look outwards or upwards, still the motion continues. When the eyelids are held apart, and she is desired to make an effort to close them, the cornea revolves upwards so as to be almost hid: the eyeball remains fixed in this position. On her closing the eye gently, the prominent cornea is seen moving opposite to where the eyelids meet. The mother was directed to observe this motion communicated to the eyelids when the eye was closed, and to look whether it continued during sleep. Three days afterwards, she informed us that there was no motion whatever in the eye when her daughter was asleep.—A child, about four years old, has always been very near-sighted. Both eyes have a continual rapid motion, which is commonly in a transverse direction, but sometimes they converge so as to produce the appearance of squinting. When an object was placed so close that the child could see it, the eyes became stationary. It appeared as if the attention of the child required to be fixed upon an object before the motion ceased. This wandering of the eye resembled what we have seen in children with congenital cataract.

We give these cases to show the difficulty of accounting for the phenomena, and we make no attempt to explain them. But we would recommend Mr. Bell to bestow some attention upon these two cases, as they appear to be intimately connected with his observations on the motions of the eye, and may perhaps conduct him to some conclusion.

At p. 79, there is a case of Spasmodic Affection of the Muscles of the Jaw: the author contrasts this with the affections of the portio dura, and states his opinion that the fifth pair is in this instance the nerve affected. The cases which follow illustrate affections of the nerves of the throat, neck, and chest. The first is an instance of complete paralysis of the voluntary muscles of the tongue: the author remarks, "it is evident that she can swallow, from her surviving the attack, which circumstance declares the glosso-pharyngeal nerve in activity; and we are told that she had the taste and the natural feeling of the tongue: that is, the function of the fifth pair was entire." He therefore concludes that the ninth pair was affected:—when he divided that nerve in a dog, the consequences nearly resembled those described in the above case. The author informs us he attended at the same time a young lady who could not swallow, and a boy who had entirely lost his speech. He relates the latter case at p. 87: this boy appears to have had disease of the temporal bone, which affected the nerves at the base of the brain. The most striking circumstances were, that he could readily make various noises, as in hollowing or laughing: he could masticate and swallow, and he could twist his tongue out of his mouth to either side; but, while he was making the effort to speak, there could not be discovered the slightest motion in his larynx. About two years afterwards he suddenly recovered his speech, by the bursting out of matter, as if from the Eustachian tube. Mr. Bell imagines that the inflammation had disturbed the operations of the nerves, without altogether destroying their influence: deranging, for instance, the fine associations necessary to speech, without arresting the motions of the tongue.

The remaining cases are more particularly illustrative of the distinct affections of the respiratory and symmetrical systems of nerves of the neck and chest. The author introduces them by referring to cases of hemiplegia, as affording opportunities of distinguishing an act of respiration from a simple voluntary action. "Although the patient cannot, by a direct effort of the will, move the muscles of one side of the neck or of the shoulder, yet, when he draws the breath, coughs, sneezes, or yawns, these muscles are put into action. A note from Dr. Abercrombie, addressed to Mr. Shaw, (p. 120,) illustrates this circumstance: A hemiplegic patient was much affected with yawning, and every time he yawned the paralytic arm was raised up with a firm steady motion. Our readers must have remarked, while observing difficult breathing, that there are many muscles of the neck, besides others arising from the shoulders, which are necessary for respiration. The head and shoulders become fixed, to allow the muscles arising from these points, and inserted into the chest, to act with greater force. But, even in easy breathing, the mastoideus acts in raising the thorax, the shoulders are elevated, and the serratus anticus expands the margins of the chest: it will be found that these actions are as necessary as the contraction of the diaphragm. It was from the author having remarked that a peculiar class of nerves is distributed to the muscles which perform these actions, that he has applied to them the name Respiratory.

At p. 102, there is a case of Spasmodic Twitchings, such as are often found in the muscles of the face: they were continued down upon the side of the neck, shoulder, and chest, being confined to the muscles of inspiration. This is succeeded by another case of a more distressing kind—a spasmodic affection of the face, throat, shoulders, and chest, on both sides of the body, which continued without any intermission, and was subject to be aggravated by excitement. Here the same class of muscles,—viz. those of inspiration, were deranged: the voluntary movements of these muscles were retained.

The next case is an affection of the Spinal Accessory Nerve, which at intervals produced violent actions in the sterno-cleido mastoideus and trapezius, so that the patient's "ear approached the sternum, and the chin was pitched upwards." He could turn his head in all directions, except at the time he was thus seized. This is followed by another case of spasmodic affection of the muscles of the neck, which produces a continual rolling motion of the patient's head, so that "it turns twenty-two times in the minute." The case that succeeds this is a spasmodic contortion of the head and neck, produced by the violent action of the sterno-cleido mastoideus and trapezius, which dragged the patient's head completely down to the shoulder, and was attended with considerable pain: no support or control by bandage could be borne.

Our author terminates his cases by noticing some affections of the Spine, which afford examples of the act of respiration being continued through the influence of the class of nerves which he calls respiratory, when the "symmetrical" system is destroyed by paralysis. An interesting case is narrated of a boy, who had disease of the upper part of the cervical vertebræ, producing paraplegia. The abdominal muscles were totally inactive and remarkably wasted, so that they were seen rising and falling according to the distention and contraction of the intestinal canal. His breathing was performed with great difficulty, and at the same time his voice became feeble. The sterno-cleido mastoideus was observed to be in strong action. When he attempted to cough, he raised his chest, but he could give no impulse in discharging the air: he performed the act of expiration by the falling of the chest merely. This case demonstrates the importance to life of the accessory nerves of respiration. They continued to possess a power over the diaphragm, serratus magnus anticus, trapezius, and sterno-cleido mastoideus. It is unreasonable to suppose that the patient could have survived by the mere action of the diaphragm alone, without the aid of the other muscles to enlarge the chest during its contraction."

Our author next enters into a demonstration of the truth of his views in a different manner: formerly he has been looking to the distribution of the nerves in illustration of their arrangement; but he enters here into another mode of argument, which throws additional light upon the apparatus of respiration. Our readers must recollect that the assertion has been repeatedly made, that the diaphragm performs the act of respiration when the spinal marrow is crushed in the lower part of the neck: Mr. Bell, on the contrary, affirms that this single muscle is unequal to this effect. Being attached to the ribs, it could not act forcibly without pulling down the margins of the chest.

"In as far as the diaphragm tended, by its action and by its descent, to produce a vacuum, the ribs, by their yielding to the action and their descent, would render the muscular effort nugatory: for, inasmuch as the cavities of the thorax would be enlarged in their long diameter by the descent of the diaphragm, so much would they be diminished transversely by the descent of the ribs and sternum. But when the serratus and mastoideus raise the thorax at the same moment with the contraction of the diaphragm, circumstances are materially altered: the ribs and sternum are raised against their elasticity, and consequently opposed to that state to which they would recoil even in death. The expansion of the margins of the chest increases the effect of the muscular effort of the diaphragm; the arch of that septum is contracted, and bears down; the abdominal viscera are lifted up, which, on the cessation of effort, recoil by gravitation into their position; and thus the elasticity of the ribs, and the weight of the parts opposing the muscles of inspiration, preserve the life when the muscular power of expulsion is gone."

We coincide perfectly with our author in objecting to the supposition of the diaphragm alone being capable of producing respiration; and besides we cannot conceive how expiration would be allowed to take place. The ribs and sternum being necessarily pulled down during the action of the diaphragm, they would expand by their elasticity whenever it became relaxed; and thus there would be an expansion of the chest in its transverse diameter, corresponding with the diminution produced in its long diameter by the receding of the diaphragm: that is, there would be as great a tendency to admit air as to expel it during expiration. These observations have convinced us that the sterno-cleido mastoideus, trapezius, and serratus anticus, are as necessary to respiration as the diaphragm: and when we see not only the phrenic nerve running in a peculiar manner across the symmetrical system to supply the diaphragm, but the spinal accessory and the superior thoracic nerves taking a similar course to the external muscles of respiration, we think the proof complete of their being of the same class, and destined for sustaining respiration.

These cases have been laid before the profession apparently for the purpose of inviting practitioners to observe what may be expected from prosecuting the study of the nerves. They point to several important circumstances in practice; and there is a general conclusion derived from their consideration which particularly deserves our attention.

"These cases are in illustration of the second paper, where it is shown that the nerves of the trunk, neck, and throat, are divisible into two distinct systems: the one the symmetrical system of nerves, common to all creatures, for bestowing the offices of sensation and voluntary motion, whose centre, therefore, is in the sensorium. There is a second class of superadded nerves, called the respiratory system: these are nerves which can perform their principal functions independent of the brain, and consequently of volition; for, although they be dependent for some of their functions on the efforts of the will, their principal actions may proceed during sleep, or when, from any other cause, there is an entire loss of sense and voluntary motion. The nerves of this last class are more easily excited in dying animals: they, in fact, retain life the longest, since they continue to influence the actions of respiration when sensation and volition have ceased. Thus forming a class of themselves, they are excited by sympathies which do not reach to the other nerves, and are sometimes left entire in their functions when the other class of nerves is peculiarly the seat of disturbance. These cases exhibit them very subject to derangement, and at the same time show the necessity of disentangling them anatomically, in order to distinguish the symptoms of disease which belong to them." (P. 82.)

It must be left for experience to decide whether these views will prove eminently useful in determining the nature of nervous complaints. But, while we are considering the tendency of these investigations, we must not limit our view of their importance to the direct practical benefit which they already afford. We ought rather to look forward to the results which may be expected to arise when these discoveries shall have induced practitioners in general to study the nervous system. We have ourselves derived much instruction from the labours of our author, and we hope they will soon be the means of leading practitioners to inquire into symptoms with greater precision and distinctness. In conclusion we may take the opportunity of remarking, that, as it has not been merely by the investigation of the nerves that Mr. Bell has made these discoveries, but rather by a very minute inquiry into the functions of the organs to which they are distributed, it will be found that, when practitioners renew their study of the nervous system, they will be naturally led to study the functions of the viscera,—a knowledge of which is the only true basis of pathology.

Rheumatism, and some Diseases of the Heart and other internal Organs: considered in the Gulstonian Lectures, read at the Royal College of Physicians, May 1826. By FRANCIS HAWKINS, M.D. Fellow of St. John's College, Oxford, and of the Royal College of Physicians; and one of the Physicians to the Middlesex Hospital.—8vo. pp. 144. Burgess and Hill, London, 1826.

THIS little volume contains the substance of the first series of Lectures delivered in the Theatre of the new College of Physicians in Pall Mall East, and we would hail it as the forerunner to some valuable contributions to the general stock of medical science from the learned body, whose splendid edifice is at once an ornament to the metropolis and a credit to the profession. We most earnestly wish that we could induce the Fellows of the College of Physicians to emulate the praiseworthy efforts of their professional brethren in Lincoln's-Inn Fields, and to afford us annually the results of that experience, and the fruits of those high talents, which are possessed by many among the members of that highly educated body. The example of the College of Surgeons is, in this respect at least, well worthy of imitation. The oldest and most experienced members of that branch of the profession have not disdained to come forward as our instructors; and they have met their reward in crowded audiences, and in increase of reputation. We do not mean to draw any invidious comparisons, but it cannot be denied that the College of Physicians have, for the most part, confided the post of lecturer to some one of the junior fellows; and, with the single exception of Dr. COOKE, (whose Croonian Lectures for 1819 were so favourably received by the public,) we do not remember any instance in which the senior fellows have lately put their shoulders to the wheel. We hope to see this altered; and indeed reports have already reached us that some change in this respect may speedily be looked for. We have in our eye at this moment many physicians, whose experience, could they be induced to give it, would be most gratefully received by a large proportion of the medical public in London; and we confidently predict that, in such a case, the theatre of the new College would be found totally inadequate to the numbers who would attend. It will probably be a matter of surprise to our country readers, when we inform them that the lecture-room of this magnificent building will with difficulty accommodate a hundred persons.

Though we have been led into this train of reflection from the perusal of the work before us, we by no means wish to insinuate that Dr. HAWKINS was undeserving of the honourable post assigned to him. On the contrary, we think that he has produced a volume useful to others and creditable to himself. It shows much learning, and is clearly and neatly put together; but, when we come to analyse it, our readers will perceive that it is chiefly occupied with speculations in pathology, which, though highly ingenious, are not to be compared, in point of value, with the results of experience in the administration of *remedies*. It is only at an hospital that such a disease as rheumatism can be properly studied; but even there, with every possible attention that can be given by an intelligent physician, many years must elapse before he has made himself conversant with all the varieties of the disease, and qualified himself to speak with confidence on those difficult and recondite points in its pathology and treatment, on which the medical world is really anxious to receive instruction. But it is time that we bring the author of the Gulstonian Lectures for 1826 more immediately before our readers; and this we shall do by giving a succinct view of the subjects discussed in each of the three lectures of which the volume is composed, selecting one or two passages out of each, as best showing the author's style of treating his subject, or as illustrating some point of particular novelty or interest.

The first lecture is occupied with speculations on the *sedt* of rheumatism. The author first inquires whether the muscular texture be in any case the seat of this affection, and he argues in favour of such an opinion, from a consideration of the symptoms of rheumatism, the situation of the pain in certain cases, and the alledged appearances on dissection, as described by some foreign writers. The author very candidly states that these arguments are not conclusive, and that they only give a degree of probability to the opinion. We are next instructed that the chief seat of rheumatism is in the fibrous and tendinous structures of our frame. "It is in this quarter that rheumatism makes its most frequent invasions, exerts its most violent and extensive influence, and too often establishes a permanent dominion." We are told that BICHAT was the first to collect those parts under the general name of *fibrous tissue*.

"They are frequently divided into two classes:—1. Those which serve to connect parts together; and 2. Those which divide and envelope particular organs.

"To the first class belong the tendons and ligaments, and aponeurotic expansions of tendons.

"To the second, the muscular fasciæ and enveloping aponeuroses; the periosteum; the fibrous coats of the nerves; the membranes which have on one side a serous lining, as the dura mater and pericardium; also the fibrous sheaths of the tendons and capsules of those joints which are provided with fibrous capsules, and the ligaments surrounding the other joints. To these may be added the membranes which have a mucous covering spread over them; such as the portions of the periosteum which line the palate, the nasal sinuses, and other internal cavities; and, finally, the capsules of particular organs, as the sclerotic coat and cornea of the eye, the tunica albuginea testis, and the capsules of the kidneys, ovaries, &c. All these parts, with the exception of the capsules of the solid organs, appear to be the frequent seat of rheumatic affections." (P. 19.)

The author then proceeds to notice that peculiar modification of rheumatism in which the *nerves* are principally attacked; and from analogy he is led to believe that, of the parts which belong to the nervous apparatus, the fibrous tunic, or neurilema, is the one most subject to the attacks of rheumatism. The fibro-serous membranes (the pericardium and dura mater) are then brought under review, and the fibrous capsules of certain joints, especially the hip and shoulder; and then we come to the *synovial membranes*, comprising the subcutaneous bursæ, the synovial sheaths of tendons, and the synovial capsules of joints.

"These are all of them subject to the attacks of rheumatism; and, when it occupies these structures, it may be recognised by the situation, the degree, the character, and the form of the swelling. The swelling is much greater in degree, and occurs much earlier after the commencement of the attack than that which is caused by an affection of fibrous structures. The character of the swelling is that of an elastic, circumscribed, fluctuating tumor; and its form is that of the distended synovial membrane, modified of course by the surrounding ligaments and tendons, according as these confine or admit of its free distention and protrusion.

"Another point of difference between rheumatism of the synovial and that of the fibrous membranes, which may be here briefly alluded to, is that the fever and constitutional disturbance are much greater in proportion to the degree of local inflammation in the latter, than in the former case.

"Again, it may be mentioned that, of internal organs, the heart and pericardium are chiefly prone to sympathise with an affection of fibrous structures; but the brain, and its meninges, with that of the synovial membranes." (P. 33.)

The author sums up by giving the following as the varieties of rheumatism founded on the peculiarities of anatomical structure:—1. Rheumatism of the fibrous membranes, including under it the three subdivisions of, 1, rheumatism of the tendons, fasciæ, ligaments, and muscles; 2, rheumatism of the periosteum; and, 3, rheumatism of the nerves or their fibrous sheaths.—2. The second great division of rheumatism includes the affections of synovial membranes.

The second Lecture is devoted to a description of the general and diagnostic symptoms of these forms and modifications of rheumatism, and to an explanation of their separate appearances and occasional combinations. Previous to this, however, a few remarks are offered on the exciting and predisposing causes of rheumatism, and on its intimate nature or essence. Dr. Hawkins, after expressing his distrust of Sir George Baker's theory, that neither gout nor rheumatism are really inflammations, but "that they have their seat in the exquisitely fine and slender radicles of lymphatic vessels," briefly notices the distinction between common and rheumatic inflammation; and then proceeds to the predisposition to rheumatism. This part of his subject is discussed with extraordinary brevity. We are simply told, that, whereas all circumstances which encourage corpulence and plethora predispose to gout, those which induce debility *appear* to give a tendency to rheumatism. Cautiously as this doctrine is worded, we yet think it quite untenable. The occurrence of acute rheumatism in fat and plethoric persons is far from uncommon; and accidents productive of local weakness, such as strains and contusions, are just as often the forerunners of gout as of rheumatism,—perhaps even oftener.

After giving us but one page on the predisposition to rheumatism, we were surprised by finding five pages devoted to the comparatively uninteresting subject of the Diagnosis of Acute and Chronic Rheumatism.

Rheumatism of the Fibrous Structures, as distinguished from that of the synovial membranes, next comes under notice; and, as this is the main feature of the work, we must dwell a little upon it. The author (page 84) acknowledges to have imbibed this distinction from one of the physicians to St. George's Hospital. The publication of a series of Cases of Rheumatism in some late Numbers of this Journal (July and August 1826,) will at once suggest to our readers the name of Dr. Chambers as the individual here referred to. These views of rheumatism, indeed, are familiar to all who have been in the habit of attending St. George's Hospital for some years past; and, as we are informed, they have been fully developed in the lectures now in the course of delivery by Dr. Chambers, in the Theatre of Great Windmill street.* Popular language, as Dr. Hawkins remarks, has long borne testimony to such a distinction, the term *rheumatic gout* being applied to the synovial species of the disorder; and we are disposed to agree with the author, that, at the *commencement* of a rheumatic attack, the discrimination of the affected structures may be made; not perhaps, as he states, invariably, but at least very frequently. It is a matter of doubt with us whether, beyond this, the distinction is of any real value. The quantum of practical benefit resulting from this nicety in pathology, may be estimated from the author's own statement:

> "Some advantage of this kind has already been obtained in the choice of remedies for the treatment of rheumatism. It has been ascertained that colchicum is almost specifically adapted for the cure of the synovial species; but that it more frequently disappoints our expectation in fibrous rheumatism, the acute form of which yields most readily to calomel and opium in considerable doses, with the interposition of occasional purgatives, and followed

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* Our readers may not, perhaps, be aware that the Critical Analyses are by no means necessarily written by the Editor. We are induced to make this remark, because, connected as we are with the School of Great Windmill-street, the form of expression adopted in the above sentence might seem to savour of affectation. We beg to say, that the division of rheumatism into that affecting fibrous and synovial tissues has been adopted by Dr. Chambers in his Lectures since they were first delivered; but that there are other less essential points on which Dr. Hawkins and he are at issue. We likewise take the liberty of differing with the Reviewer with regard to the value of these pathological distinctions, which appear to us to lead to immediate and unequivocal advantages in practice.—Editor.

up by moderate sudorifics; and, finally, by the administration of cinchona. Topical remedies, as has been mentioned, are chiefly proper for articular rheumatism; but blisters have also a good effect in lumbago and sciatica, and deep-seated pains of the joints. Sarsaparilla and alteratives are required for chronic and cachectic cases, particularly for affections of the periosteum." (P. 88.)

When, however, we consider that the different kinds of rheumatism are frequently met with in combination, or in close succession to each other,—that both species are avowedly under the influence of the same causes, predisposing and exciting,—and that the respective remedies for these affections differ from each other more in degree than in kind, we must hesitate ere we agree with the author's concluding observation, that, "if the varieties of rheumatism are more attentively studied, a still closer adaptation of means to their cure may even yet be effected."

Some useful observations occur at page 64, on the symptoms of periosteal and nervous rheumatism, which we regret that our limits will not permit us to transcribe. We pass on, therefore, to Lecture third, which treats of the Rheumatic Affections of the Heart, and other internal organs, with a slight allusion to Rheumatic Ophthalmia. The obscurity in the symptoms of pericarditis is first touched on, and two interesting cases are related, wherein furious delirium was the leading symptom during life. The following remarks are too valuable to be passed over.

"From an examination of the cases which have been recorded of rheumatism of the heart, it appears that a large proportion of the subjects of this affection were young persons under thirty years of age: in most of them there were marks of constitutional or acquired debility: many were of a slender and delicate form, and pale and languid in their appearance. In these circumstances we have a strong confirmation of the remark, that excessive bleeding in the treatment of acute rheumatism, or any measures calculated to induce debility, increase the danger of metastasis to the heart and pericardium; and that the exhibition of bark, as soon as it can be borne with safety, is of considerable efficacy in counteracting this tendency. To the same general principle may be referred the observation, long since made, and well established, that when the pain and inflammation of external or primary rheumatism shift their situation capriciously from one limb to another, they are then most liable to be transferred to some internal organ; for the debilitating treatment before alluded to is undoubtedly calculated to give to rheumatism this migratory character." (P. 103.)

The author has taken much pains to determine what is the usual condition of the heart after repeated attacks of a rheumatic kind, and he tells us (page 115), that the tendency of this disorder is to produce simple dilatation, *without thickening*. He is inclined to suspect that, in a certain proportion of these cases of enlarged heart, the pericardium was the seat of the first attack. In cases of enlargement with hypertrophy, it is probable, he thinks, that the heart itself was primarily attacked. These speculations seem to us very open to objection. The author quotes largely from LAENNEC. We were rather surprised by the mention of one of that author's cases, in which "the heart, upon dissection, presented evident marks of having been shrunk and reduced from its former size." Dr. Hawkins appears to credit this tale, but we confess it passes our belief: the more so, as we find it brought forward, not as an insulated fact, but to support a particular practice, which Laennec had undertaken to recommend. On the means of treating these rheumatic affections of the heart, we do not find any thing in this work which is not generally known to the profession.

Pleurodyne, or rheumatism of the thoracic parietes, is next noticed. The difficulty of distinguishing this disease from internal inflammation is, according to Dr. Hawkins, "the less to be regretted, since, when rheumatism attacks the parietes of the thorax, it is so apt to be communicated to its contents, that the treatment must be nearly similar. To guard in such cases against internal inflammation, blisters should instantly be applied; since these, which are of use in any stage of the disease, have ever been found the best preventive remedy." (P. 130.)

The author will excuse us if we venture to differ from him here, both in observation and practice. We are disposed to say, that rheumatism affecting the thoracic parietes is, for the most part, a transitory and subacute affection, and by no means likely to affect the subjacent viscera. Again, instead of recommending blisters, we are in the constant habit of employing the warm bath, which we can affirm, from ample experience, to be extremely useful in this form of rheumatism. By the way, we regret that the author, who is an hospital physician, and who must have had many opportunities of using this remedy in the different kinds of rheumatism, has said so little about it, either in the way of praise or blame.

It has already been mentioned that, according to our author, metastasis to the heart chiefly occurs from diffuse rheumatism, and metastasis to the head from bursal or synovial rheumatism; cases illustrating which position were given by Dr. Chambers in the Number of this Journal for last August. With reference to rheumatic ophthalmia, a suggestion is thrown out, that, when fibrous rheumatism prevails, the sclerotic coat and iris will be found affected; and that, when the synovial membranes are the primary seat of disease, the tunica conjunctiva is the first to suffer, although the affection may subsequently extend to the deeper structures within the orbit.

In the sketch now given of Dr. Hawkins' Lectures, it has been our object to put forward those parts only which come recommended by their novelty. Our readers will, of course, understand that the more ordinary phenomena of rheumatism are also to be found in the work, rendering it a very complete treatise on this painful and still obscure disorder. We cannot better conclude than by earnestly pressing on the author a further inquiry into its phenomena, well satisfied that in his hands they will neither be overlooked, nor imperfectly investigated.

*On Alteration of the Nails and Disease of the surrounding Skin.

By M. Hipp. Royer Collard. (From the Répertoire Général d'Anatomie, &c. No. III.)

The relater of these cases thinks it necessary to make a few brief observations upon the structure of the parts, before he enters upon the description of the diseases incidental to them. Some anatomists have included under the term *nail* the soft parts surrounding the substance to which that term is ordinarily confined. It is absolutely necessary to determine whether our observations are confined to the nail itself, or whether they include that organ and the parts which secrete it. In the former case, we could not speak of *disease* of the nails: the nail can never be diseased, since it is not organised. But, in the latter acceptation of the term Nail, such an expression would be perfectly correct. To avoid all perplexity upon this subject, M. Collard states that he adopts the former opinion. He deems it improper to confound two such dissimilar organs. The matrix of the nail is no more the nail, than the bulb of the hair is the hair itself. M. Dupuytren, considering that the nail is produced by that portion of skin into which it sinks, and which is reflected over the edges of its circumference, has applied to it the term of *matrice de l'ongle,* (matrix of the nail.) He has called the attention of the profession to the inflammation of that part; and, after having carefully distinguished it from the disease in which the nail grows into the flesh, he has proposed a certain mode of cure for both these species of maladies.

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* This article is to be regarded as a condensed translation rather than a critical analysis: perhaps it might, with more propriety, have been placed among our hospital cases.

It has been already observed, that no disease of the nail can take place. The morbid condition must belong exclusively to the surrounding skin; but, as the nail is almost always altered in its appearance consecutively, our attention has been directed to this circumstance, and the symptom has been taken for the disease,—at least in surgical language. The intense pain which accompanies such affections, and the extreme difficulty with which they are relieved, render the subject worthy of attentive consideration.

The morbid affections of the skin surrounding the nails are always of an inflammatory nature; but the characters of such inflammation may, of course, vary with the cause producing it, and the treatment demanded will not be the same in all cases. Upon this part of the subject, M. Collard considers the clinical observations of M. Dupuytren very important. That distinguished practitioner is said to have thrown a new light upon the subject, by distinguishing the various affections of the skin of the nails into those seated in the extreme and lateral parts of the finger or toe, and into those occupying the posterior reflection which gives rise to the nail. Such an alteration of the nail, also, may exist as to injure the adjacent soft parts, or the disease may commence by inflammation of that part of the skin to which the term matrix of the nail is applied. The nail may be altered either in its substance, its form, or its direction. The cause of each of these alterations may be either external, or dependant upon derangement of the skin which secretes it. Whenever the nail is thus changed in its formation, it injures the surrounding parts, and enters into the substance of the flesh: and thus is the disease formed which is known by the name of *ongle entré dans les chairs, ongle incarné* (de MONTEGGIA), *reserrement de l'ongle* (de PLENCK), and to which M. Royer Collard has applied the term of *incarnation de l'ongle.*

With this disease most authors have confounded many other morbid affections of the skin surrounding the nails. It never occurs in the hands, and is generally seated in the great toe, on its internal angle. Wearing a tight shoe is a common exciting cause. The pain is considerable as soon as the nail enters into the neighbouring flesh; the patient walks, and even stands, with difficulty: a serous or purulent discharge soon takes place, and, if much exercised, the whole foot swells. If the disease be left to itself, the ulcer sometimes becomes cancerous, and is occasionally covered with enormous granulations. The inflammation may also extend to the periosteum, and necrosis of one or more of the phalanges may follow.

A case is related in which this disease was mistaken for gout. The removal of the nail, in the manner adopted by M. Dupuytren, entirely cured the patient.

M. Royer Collard describes at some length the various modes of practice which have been recommended by different authors, to all of which he urges various objections. He considers them all inefficacious, when the cause of the mischief arises from some alteration in the nail itself. M. Dupuytren is also of the same opinion, and for a long time he has preferred the complete evulsion of the nail to every other practice. This operation had been before performed by other surgeons, but by a very ineffectual and painful process. M. Dupuytren proceeds in the following manner:—The inflammation of the part is first relieved by appropriate treatment. The surgeon takes a strong pair of straight and very sharp scissors, one blade of which is pointed. This blade is introduced under the nail, and pushed quickly towards the middle of the root; the nail is divided into two equal portions, the incision being carried about three lines beyond its termination. The anterior part of that portion of it which keeps up the disease is then grasped by a pair of dissecting forceps, and reflected upon itself; whatever adhesions there may exist between it and the surrounding parts are successively removed, and the nail is torn away. If necessary, the operator treats the other portion of the nail in a similar manner. If the fleshy excrescences which are near the ulcer are much elevated, M. Dupuytren destroys them with the actual cautery, and thus ensures as much as possible a radical cure. The nail being thus removed, the skin underneath becomes dry, and the ulcerated portion heals in twenty-four or forty-eight hours; so that the patient, in five or six days, can resume his accustomed exercises.

In general, the nail does not grow again in old people. It is sometimes reproduced in young persons; and then, if the cause of the mischief resides in the skin which produces the nail, it is to be apprehended, in spite of every attention during its growth, that it will re-appear in an unfavourable form. Such accidents, however, are rare after the complete removal of the nail.

This mode of treatment is not applicable to every case. In 1814, Mr. WARDROP* described a species of panaris which he designated by the name of *onychia maligna*, and which is nothing more than ulceration of the matrix of the nail. Mr. Wardrop, however, in describing this disease, of which M. Dupuytren had spoken several years ago, has confounded together many varieties of that affection, and, in consequence of this error, he has proposed the same treatment and the same common rules for cases totally dissimilar.* M. Dupuytren has clearly distinguished between the cases of "incarnation de l'ongle," and "l'ulcération de la matrice de l'ongle." Although we have observed that *disease* of the nail could not correctly be said to take place, it has been seen that the nail may be altered in its structure, in its form, and in its direction, and that, in consequence of such alterations, the surrounding soft parts would be injured. It is now, however, our object to consider those cases in which disease first occurs in the skin surrounding the nail. Such affections may either arise from an external and mechanical cause, or from the action of some particular morbid poison. When the disease does not arise from external violence, it is always difficult to detect the cause. The most common cause, in such cases, is said to be the action of the syphilitic virus, and the term *onglade,*—ulceration around the circumference of the nail,—has been applied to designate this disease. This affection, however, has not been mentioned by writers on the venereal disease. Mr. Wardrop has confounded it with common inflammation of the matrix of the nail. The subject has been very slightly noticed by M. Boyveau Laffecteur, and in an article in the Dict. des Sciences Medicales. Whether the disease does or does not depend upon the action of the syphilitic virus, it always presents particular characters:—1. It affects indifferently the nails of the feet and hands. 2. It always attacks several at the same time. 3. It sometimes commences by small ulcerations between the toes or fingers, which usually extend from their original seat around the circumference of the nails. 4. The nail is spontaneously detached. 5. It resists the anti-syphilitic treatment. M. Dupuytren has proved this fact in more than thirty cases, and he is of opinion that, however judiciously mercury may be employed, externally or internally, no benefit will be derived from its use. On the contrary, the wound generally assumes, under the exhibition of that medicine, a very unfavourable appearance, and emits a fetid odour. Mr. Wardrop, however, states that he has given mercury with success. 6. As soon as the nail falls off, a simple dressing is sufficient for the cure. In such cases the wound is usually covered with a sanious or bloody suppuration, which is extremely fetid. So offensive is the odour which exhales from the feet of such patients, that it is almost impossible to remain near them. If the patient attempts to walk, or even stand, the fungi bleed. No covering can be borne on the feet; the slightest friction being excessively painful. In most patients the above symptoms occur. Sometimes the disease occupies more particularly that part of the skin which is immediately subjacent to the nail. Small tumours are then formed under the skin, from the pressure of which considerable pain arises. These tumours are of different characters: they may be either fibrous, cartilaginous, osseous, or vascular; and it is certain that their development proceeds entirely from an alteration of the skin, which is covered by the nail; for, if the tumors are removed without the skin which produces them, the latter generally again becomes diseased, and ulcerates; and, sooner or later, its entire removal is necessary.

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* Medico-Chirurg. Transactions, vol. v. p. 129, "Diseases of the Toes and Fingers, by J. WARDROP." 1814.

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* A reference to Mr. Wardrop's paper will show that this statement of the French writer is erroneous. That gentlemen has very clearly distinguished the two species of disease, each of which is described in a separate section. Upon some points Mr. Wardrop differs from M. Dupuytren.

As in this disease the skin is the part affected, our remedial means must, of course, be directed to it. If we are satisfied with only removing the nail, the seat of the disease is not destroyed, and a great number of cases have proved that it is never cured by such treatment. If we apply caustic after tearing away the nail, as Mr. Wardrop recommends, and as has been practised by Béclard, only that portion of the skin is consumed which is immediately subjacent to the nail, and all that which envelopes its root is not destroyed. M. Royer Collard knows but one successful method of treatment,—that which is employed by M. Dupuytren. The foot of the patient being fixed, and the affected toe grasped by the left hand of the surgeon, a deep and semicircular incision is made with a strait bistoury, three lines beyond, and parallel to, and surrounding, the duplicature of the skin, which supports the origin of the nail. The diseased toe being then held in its position by an assistant, the operator raises the divided skin from the root to the termination of the nail with a pair of dissecting forceps, and detaches all that portion of it which is connected with the nail, and which assisted in its production. If any fragments of naily substance still remain, they are to be successively destroyed, so that no portion of diseased tissue may be left. The operation is painful but short. The toe is lightly and simply dressed, and the patient put to bed. The leg must recline upon a pillow, and be half bent upon the thigh. In the course of three or four days, the first dressing is removed, and the wound is then usually covered with laudable pus. Simple dressings are still applied, and any granulations that may arise are kept down by caustic. If any small portions of nail are reproduced, they are to be removed, and that portion of the skin which gave rise to them destroyed with a bistoury. In about fifteen or eighteen days, the patient is able to resume his usual occupations. The disease never resists this mode of treatment, as the diseased parts are entirely removed. M. Dupuytren does not conceive that this operation is always necessary: he recommends the employment of other means, to prevent, if possible, so painful a remedy, such as antiphlogistics of all kinds, baths, rest, leeches, emollient poultices, or antisyphilitic remedies, as calomel, mercurial ointment, &c. He has sometimes successfully employed lint soaked in port wine, with one ounce to a pint of the liquor litharg. acet. In support of these opinions, many cases are related from the practice of the Hotel Dieu. Some of them are instances of simple incarnation of the nail; others of affections of the skin forming the matrix of the nail. Many are complications of both these species of disease. We have selected some of the most interesting examples:—

Case I. *The Nail penetrating the Flesh: Removal of the external Half of the Nail.*

Jacques Roussin, seventeen years of age, of a strong constitution, was admitted into the Hôtel Dieu, June 18th, 1821. For the last six months he had worn very tight and thick shoes, by which his feet were much compressed. The external angle of the nail of the great toe was bent inwards, and penetrated the flesh which covered it, and which was much swollen. The part was red and painful, and the lameness gradually increased. The fleshy excrescence of the part confined by the other toes, and pressed upon in every direction by the shoe, became hard, callous, and of a whitish colour. The patient continued to work, although he suffered considerably. A small wound at length taking place, which occasionally bled and discharged a small quantity of pus, he determined to enter the hospital.

After a few days' rest, and the use of baths and some emollient applications, M. Dupuytren removed that portion of the nail which was covered by the surrounding flesh. The nail was divided down the middle with a pair of strong straight scissors; the external half was grasped with dissecting forceps, reflected upon itself, and torn away. The callous skin which covered it was removed with the scissors. But a small quantity of blood was lost. The patient was put to bed, and the part simply dressed. In four days he left the hospital cured; but he was desired to wear larger shoes, and to cover the toe with a pledget and simple ointment.

CASE II. *Removal of the Matrix of the Nail; Cauterisation of the Skin.*

M. Simon, twenty-three years of age, of good constitution, was admitted the 23d February, 1819. The great toe of the left foot discharged a greyish and fetid matter. The nail had partly fallen off, and the remaining portion of it penetrated into the flesh, and maintained a constant irritation and considerable discharge. When the patient attempted to walk, the toe bled. About six weeks before, a piece of wood had fallen upon her foot: inflammation and suppuration of the toe ensued, and a portion of the nail was detached, which was removed by a surgeon, who allowed the root of it to remain, as it still adhered to the surrounding parts. Notwithstanding the removal of the separated part of the nail, the distressing symptoms still continued, and she requested admission into the hospital.

The inflammatory symptoms were first relieved by appropriate treatment, and M. Dupuytren then proposed to remove the nail entirely, and to cauterise the diseased skin, so as to convert the ulcer into a simple wound. He removed with a bistoury all the skin which surrounded the nail, and the nail itself, and then cauterised with a red hot iron the bleeding surface. The operation was short, but excessively painful. The wound was dressed with simple ointment and lint, and a light bandage was applied. The dressings were removed five days after the operation: suppuration had commenced, and the parts destroyed by the cautery had separated. Digestive ointment was applied. In about a month from the performance of the operation, the wound was entirely healed, and the patient was dismissed. She was recommended to remain as quiet as possible for some days.

CASE III. *Disease of the Matrix of the Nail; Removal of the Skin, and Cauterisation of the Part.*

In June 1822, a young girl, affected with inflammation of the skin which serves for the reception of the nail, was admitted into the Hôtel Dieu. The disease had existed for years. M. Dupuytren removed with a bistoury all the surrounding skin and the nail itself, which had not penetrated the adjacent soft parts. Fifteen days after the operation, a small portion of naily substance being reproduced, it was removed with dissecting forceps, and M. D. cauterised the bottom of the fresh wound which he had formed, with a piece of lint soaked in a solution of nitrate of mercury. At the end of twenty days, the cicatrix was complete and remarkably firm, and the patient left the hospital.

Several other cases are given, illustrative of the efficacy of the treatment pursued by M. Dupuytren. The Atlas contains also some engravings of the two species of the disease described in the paper.

The principal points which are insisted upon in the above paper are—

1st. The necessity of distinguishing that affection of the toe or finger which arises from the entrance of the nail into the surrounding flesh, from that disease which is not very uncommon in the same parts, and the cause of which is a diseased condition of the secreting organ of the nail.

2d. That each of these two maladies requires a different mode of practice.

The profession must feel indebted to M. Dupuytren for the attention he has devoted to so painful, although apparently unimportant, a disease. But we must suggest to M. Royer Collard, that neither the views which he promulgates in his paper respecting the nature of the disease, nor the treatment, which he considers peculiar to M. Dupuytren, can lay claim to originality. We have thought, however, that it would be of use to bring the subject before our readers, because, although the views contained in this paper have long been known to some English surgeons, still we believe that they are not so generally diffused as their importance deserves.

Medical Botany; or, Illustrations and Descriptions of the Medicinal Plants of the London, Edinburgh, and Dublin Pharmacopœias, with those lately introduced into Medical Practice: comprising their Generic and Specific Characters; English, Provincial, and Foreign Appellations; a copious List of Synonyms; Botanical Descriptions; Natural History; Physical, Chemical, and Medical Properties and Uses. Including also a Popular and Scientific Description of Poisonous Plants, particularly those that are indigenous to Great Britain and Ireland; with Figures coloured from Nature. The whole forming a complete System of Vegetable Toxicology and Materia Medica. By JOHN STEPHENSON, M.D. Graduate of the University of Edinburgh; and JAMES MORSS CHURCHILL, Esq. Surgeon, Fellow of the Medico-Botanical Society of London. Nos. I. and II. (to be continued monthly.)—8vo. John Churchill, London, 1827.

THE two first Numbers only of this work have appeared; but we have no hesitation in saying that, if the subsequent parts resemble those before us in their execution, the undertaking will merit the countenance of the profession. That a correct set of engravings of medicinal plants is a desideratum, cannot be doubted, as at present we have none which are even tolerably good; and it is the desire to give publicity to the attempt now made to remedy this evil which induces us to depart from a general rule, by taking notice of an *indigenous* periodical.

Each Number contains four plates; and the engravings are really very prettily executed.

In a work of this nature, we may say, without derogating from the character of the author, that the value depends principally on the fidelity of the drawings; and this is the point, too, in which most originality may be shown. The description of the plants, and the details of their properties, must necessarily be principally compiled from preceding writers, although there is abundant room for selection in the materials.

The plan is as follows:—we have first the name of the plant, with its place in the classifications of LINNÆUS and JUSSIEU; its generic and specific characters and synonyms. Next comes the locality; a more particular description, with reference to the plate; the qualities, chemical composition, the medical properties and uses; the effects when the substance acts as a poison; the doses, officinal preparations, and formulæ.

Having thus introduced the Medical Botany to our readers, we have only left to wish the editors success in an undertaking which we think so well calculated to be of use to the profession.

COLLECTANEA.

Floriferis ut apes in saltibus omnia libant,
Omnia nos, itidem, depascimur aurea dicta.

PHYSIOLOGY.

Case of Spontaneous Depilation. By W. J. CARSON, Esq. (From the Edinburgh Journal of Medical Science.)

Mr. J. H. in B——, county of Cumberland, unmarried, ætat. thirty-five. The patient is a strong-built, muscular man, fully six feet in height, free from either local or constitutional disease, excepting that which I am about to describe. Some years ago, had one or two slight attacks of pleuritis, which were readily subdued by the common mode of treatment, without leaving any bad effects; and, with the exception of those, has always enjoyed an excellent state of health, and up to the present time been actively employed in agricultural pursuits.

He is so completely denuded of hair, that, after the minutest search, I was unable to find even the vestige of one upon any part of his head, body, or extremities, —even the supercilia, vibriscæ, and pili auriculares, have entirely disappeared; whilst his skin is of a healthy colour, and free from the smallest perceptible irregularity of surface. When examined upon the circumstances connected with the first appearance of the disease, he stated, that the hair of his head was always of a lightish cast; his beard, whiskers, &c. reddish, and that every where it was particularly plentiful and strong. This I can myself confirm, recollecting to have seen him about a year ago in his usual good state of health, when, even upon the backs of his hands, it seemed to be more abundant and stronger than in most people.

States, that he observed it first when shaving, on or about the 14th of March, 1826, in the appearance of a small bare spot over the buccinator muscle of the right cheek: and that, as he continued to shave, the hair, instead of being cut smooth with the surface, for the most part came away by the roots, and in such quantity, that, after having shaved a few more times, he had not a hair left upon his face. On the same 14th of March, he went to a person in the neighbourhood for the purpose of having his hair cut. The individual whom he employed to do so observed a small bared spot over the transverse ridge of the occiput, on the right side, which from that day forward gradually extended, till, before the middle of May, he was so totally denuded as not to have a solitary hair on any part of his frame. During the progress of the disease, he did not experience the least pain, sickness, or uneasiness, excepting what arose from the disagreeable inconvenience of the hairs falling into his victuals, &c. upon the smallest motion.

Another no less remarkable feature of the case is, that the finger-nails seem to participate of the general disease; as, though they have not actually dropped out, yet they are shrunk and withered, and appear not to receive any nourishment by their roots: at the same time they are of a whitish colour, brittle consistence, and very ragged at their extremities. This appearance did not present itself till perhaps three months after the loss of the hair; and, what is singular, only the finger-nails are thus affected, whilst those of the toes retain their natural colour and consistence.

The head perspires so freely that it is always moist, whilst there is no perceptible perspiration upon any other part. For the last three months he has worn a wig during the day, and a warm cap at night; but, whether the wig be on or off, the perspiration over the whole surface of the head is the same.

Previous to November 1825, he was accustomed to partake freely of spirituous liquors, though by no means what is generally called a drunkard; but, about that time, having taken some dislike to spirits, he all at once and entirely refrained from them: he, however, still continued to take strong ale, and perhaps even in greater quantity. In this consisted the sole difference of his regimen, or way of living from what it had always been. About the month of June last, however, some one having told him that his abstinence in this respect was the cause of the hair falling away, he again began to take spirits as before—freely, but not immoderately.

Case of Ulcerated Cornea, from Inanition. By Joseph Brown, M.D. (From the Edinburgh Journal of Medical Science.)

On going yesterday to visit a poor babe, which you know I was attending at ——, I found that both corneæ had become opake over a considerable portion of their surface, and that ulceration had commenced; and, on repeating my visit today, I found that this ulceration had proceeded so rapidly, that, should the little patient live four-and-twenty hours longer, I am convinced that the contents of the eyes will be discharged. The child, which is six months' old, is as much emaciated as possible, the movement of the intestines being visible through the parietes of the abdomen. It was born prematurely, and never had the breast-milk. Since my attendance, which began ten days ago, its diet has consisted of asses' milk, sugar, and biscuit-powder: but, from the feebleness of the digestive function, it never seems to have derived sufficient nourishment from any food that has been given to it, and has been harassed ever since its birth with bowel complaints.—Compare this case with Magendie's account of the dogs fed, or rather starved, on sugar.

PATHOLOGY.

Distinction between Small-Pox and the Varioloid Disease.—At a late meeting of the Institut Royal de France, M. Moreau de Jonnés read a Memoir, entitled "Recherches pour determiner le Caractere et les Effets de la Variole, et pour decouvrir l'Origine de cette Maladie," in which he states that the varioloid disease (*la varioloide*) differs from small-pox. Without implying any assent to his propositions, we subjoin his statements:—

The varioloid disease differs from true small-pox essentially in its effects—1st. In attacking individuals vaccinated, inoculated, and those having already had the small-pox naturally. 2d. In constantly putting on an unfavourable character, and being often fatal when it attacks individuals not vaccinated, whether they have had the small-pox naturally, or by inoculation, or not at all.

It differs also in its symptoms—1st. By the tubercular form of the pustules, which is more distinct, and common to a greater number of papulæ. 2d. By nausea and vomitings, which accompany the commencement of the disease more constantly than in ordinary small-pox. 3d. By a greater disposition to affect the lungs, to produce cough, and a sense of fulness and oppression. 4th. By the pustules not being so deep, and containing a liquid often remaining limpid instead of becoming purulent. 5th. By the crusts not crumbling into powder between the fingers, as in those of common small-pox. 6th. By the absence of fever. 7th. By the marks left, which, though indelible, are smaller and shallower, and more confined to the surface of the skin. 8th, and lastly. By a less characteristic smell than in ordinary small-pox.

The varioloid disease has a distinct existence and mode of propagation. It exists simultaneously with small-pox and chicken-pox, and may either follow or precede their irruption, or accompany them. Physicians confound it with both. Many consider it not as a species, but a variety,—a modification of the common small-pox, produced by the agency of the vaccine virus on it. The opinion of its identity with small-pox as to its origin, is supported by experiments, which it would be unnecessary to repeat. It has been stated, that inoculation with the virus from the varioloid eruption has produced ordinary small-pox. In examining the difference of symptoms and power of the two diseases, and particularly by tracing attentively the progress of the varioloid disease, he is inclined to think, with some of the practitioners of America and the North of Europe, that it is a new species.

If it is true, as they say, that the degeneration of the vaccine virus is the cause of the increase of small-pox, and that the mortality which happens by its increase is the effect of that degeneration, without doubt there would be no difference in countries where that practice has been simultaneously adopted. Vaccination would be no more a preservative in Bohemia and Russia, than in England, Scotland, in a part of France, and the United States. Now, this is not the case. In London, in 1817, the mortality caused by small-pox was 1 in 19; at Paris, in 1825, 1 in 18; whilst at Prague, in 1810, it was 1 in 265, and of nearly 100,000 inhabitants, the small-pox carried off only 14 people. In Sweden, even in 1824, its ravages have been still less, and the efficacy of vaccination had not there experienced any diminution till the appearance of the varioloid disease in that country, which, in 1779, lost 15,000 individuals in a population of 1,958,000; which made a mortality of 133 inhabitants by the small-pox. In

1822, there died but 11 out of 2,697,000, or 1 in 2,045. But a mischievous invasion of the varioloid disease has altered this happy state of things. At those same times, the same disease had caused a mortality in London of 1 in 1000; and at Paris of 1 in 540. So great a mortality from small-pox shows that small-pox is resuming in these two capitals its epidemic character, which it had lost for thirty years, since the introduction of vaccination. The small mortality by this disease in Bohemia and Persia shows, on the contrary, in proving its existence, that it is powerless, and cannot surmount the obstacles opposed to it by vaccination.

We must then look for some other cause for the increase of small-pox contagion, than the weakening of the protecting influence of vaccination, since the increase is only in some countries, excluding many others. It will be found that those countries where the varioloid disease has not yet appeared are in the eastern part of Europe, far from the shores of that continent. Following this indication, one is soon convinced that the maritime countries of both hemispheres have been the first attacked: in Europe, Great Britain, the Hanse Towns, and France; in America, the United States. In these countries, the towns where commerce is most active and most extended, have been first visited by this scourge: London, Edinburgh, Hamburgh, Paris, New York, and Philadelphia, are the places which have first felt its effects.

The same observations may be made on the two shores of the Atlantic Ocean: it is in the ports most frequented that this new species of small-pox has first appeared; and the people who have first felt its effects are those whose ships almost exclusively navigate the Indian Ocean. It is in the United States and Great Britain that it has first shed its fatal influence, and just at the time when the ships of these two countries redoubled their efforts to increase their commercial relations with eastern countries.

The author goes on to state, that, when England first pushed her conquests in India, there appeared in the English ports a species of distinct small-pox, observed by Dr. Mead, and described by him under the name of Variola Siliquosa. There is no doubt that, from time immemorial, there has existed in Hindostan several kinds of varioloid diseases, and it is extremely probable that those known to Europeans took their origin in that region of Asia. It appears (he continues) that the vaccine virus exists in many parts of Asia, and that its properties have been recognised there for a long time. Among some of the wandering tribes inhabiting Persia vaccination is known, and frequently propagated; and, what is extraordinary, it is more frequently from sheep than cows that the virus is communicated to the shepherds. In Persia, the sheep are milked as much as cows are with us. In considering the frightful mortality of small-pox in Asia, one is disposed to believe that among their species there exists not only the small-pox commonly known in this country since the tenth century, but also this kind recently imported, and designated by the name of Varioloid.

M. Jonnes sums up with the following conclusions:

1st. That the varioloid eruption is a species of small-pox, distinct in its symptoms, effects, and origin, from that introduced into Europe eight centuries ago.

2d. That there is reason to believe that this new species belongs in the first instance (as was the case with the old,) to the tropical regions of Asia, whence it has been imported to the United States and England, within the last ten years.

3d. That it is only since vaccination has begun to show itself a less certain protector, that the varioloid disease has appeared in America and Europe, and has there been propagated, first by maritime communications, and then by degrees spreading inland.

4th. That this species, which seems analogous to the Variola Siliquosa of Dr. Mead, the appearance of which in England coincided with the first conquests of the English in India, is more dangerous than common small-pox when not modified, and causes a greater mortality.

5th. That neither the ordinary small-pox in the natural way, nor communicated by inoculation, nor the vaccine virus, protest against it.

6th. That sometimes the vaccine virus weakens and modifies its pernicious influence; that, in the United States, of fifty individuals vaccinated and seized with this new species, none died; while, of one hundred not vaccinated who were attacked, one half perished. Whence it follows that, although vaccination does not secure from this scourge, it so modifies it as to blunt its virulence, and therefore is a most useful and indispensable precaution.—*Revue Medicale.*

INTELLIGENCE.

MONTHLY REPORT OF PREVALENT DISEASES.

The cold bleak winds which have prevailed during the latter part of the last month, have given rise to abundance of pulmonary complaints, and Pneumonia and Pleurisy have been more frequent than at any former period of the season. In addition to these purely inflammatory cases, we have seen several instances in which continued fever has been combined with severe affection of the lungs, especially towards the advanced stage of the disease, by which the convalescence has been sometimes rendered extremely slow. The same state of atmosphere which has produced these symptoms, has likewise proved severe upon elderly persons labouring under " winter-cough." The habitual pulmonary affection has in them occasionally assumed a more acute form, requiring depletion, and in some cases proving fatal, by an overwhelming secretion of muco-purulent matter, from which the patients have been unable to clear the air-passages. In addition to these, we have met with several cases in which the larynx and trachea have been the seats of inflammation, both in children and in adults. We may therefore, with propriety, say, that inflammatory affections of the respiratory organs have been the prevailing diseases of the month.

February 23d.

Case of Obliteration of the Aorta, &c.

SIR,—Some kind, but unknown friend has lately sent me several Numbers of a little work, published by the Medical Society of Tours. I therefore take the opportunity of acknowledging my obligations, by freely translating a case of Obliterated Aorta; and beg to remark, that the fact of that vessel being obliterated without producing death of the lower extremities, is the best answer that could be given to those who have abused Sir A. COOPER for his hitherto unexampled operation of tying it. I once tied the aorta of a dog with complete success; and, as nature performs her work most efficiently by enlarging anastomosing vessels, in a ratio with the increased necessity for their exertions, I cannot but hope that the day will ere long arrive when the same operation will be successfully performed on man. The case is interesting in other points of view; but the pathological descriptions are obscure, and difficult to comprehend. I am, Sir, your obedient servant,

JAMES M. CHURCHILL.

77, Dart-street, Grosvenor-square.

A woman named Cabaret, thirty-six years of age, and of a good constitution, had always enjoyed excellent health until six years ago, when she observed in the anterior and lower part of the arm, between the elbow and wrist, a moveable but not painful tumor, of the size of a hazel-nut, which gradually increased to that of an egg, and became the seat of violent shooting pains. After having in vain employed different means, the tumor was removed with the knife, by M. DUPUYTREN, in 1821, and healed very speedily; but returned soon after, and was then excised by M. DUBOIS. The healing of the wound seemed at first to proceed rapidly; but granulations occurring, recourse was had to arsenic paste, and the healing was accomplished in a few months. On the 24th of July, 1824, this woman felt some shooting pains a little above the old cicatrix, and soon after had some slight fits of coughing, attended with constriction in the chest, but without expectoration or any particular pain. The catamenia continued regular. She applied no remedy,—only took less food. In the month of October, the cough became violent, her breathing shorter; she was seized with paroxysms of suffocation; her appetite diminished, and sleep deserted her. She was ordered pectoral ptisans and opiates, but her sufferings increased. Towards the latter end of November, she was ordered saffron pills; and from that moment the symptoms acquired much intensity.

She was removed to the Hospital of St. Côme on the 9th of December. Her appearance differed little from a state of health; her tongue was white and moist; she had but little thirst, never any fever; her respiration was slow, short, and difficult. On percussion, her chest sounded much. The stethoscope *(le cylindre,)* showed that the air entered freely into the lungs. On the fore-arm there was a fixed tumor, unattended by pain, or by alteration in the skin. M. BOUGON, the king's surgeon, thought there was cancer in the lungs, and prognosticated accordingly. The suffocating fits and the dry cough went on increasing, particularly towards night; the pulse remained calm; the abdomen was soft, and not tender.

On the 11th of January, 1825, the lower extremities appeared to be paralysed, and the patient died, though still somewhat corpulent.

The body was examined thirty hours after death. There were found—

1st. A schirrous swelling forming one mass within the radius, half an inch above the scar left by the second operation; tubercles of the same kind in the thyroid gland, and between the muscular fibres of the right thigh.

2d. Cancerous depositions in the tissue of the heart, and between the ribs and the pleura. In all points of both lungs were numberless hard round bodies, the largest not exceeding the size of a small hen's egg. Some appeared schirrous; others, in great number, had the character of a brain-like substance. Stony, calcareous masses occupied the mesentery: others, of a medullary nature, the omentum. Schirrous and cancerous tubercles were beneath the mucous membrane of the stomach, of the duodenum, of the small intestines, of the gall-bladder; likewise in the kidneys and the pancreas; while the liver appeared to be gorged with them.

3d. In the interior of the vena cava, a cylinder of a greenish colour, and of a fibrous texture; one of its branches having a cancerous appearance.

4th. From the third lumbar vertebræ, *the aorta was filled with a cylinder of a yellowish grey colour,* in which was observed a small quantity of puriform matter. *In the common and external iliacs, a substance offering most of the characters of old coagula.* The contexture of the vessels was not altered. *All the arteries proceeding from the aorta above the obliterated point were free, and of greater amplitude than usual.*

5th. Two tubercles, of the same kind with those of the other organs, on the internal surface of the dura mater. A third, of the size of a walnut, within the right occipital fossa, the pressure of which had produced absorption of the bone.

M. Velpeau, the senior clinical professor, considers this as one of the most interesting cases that can be stated, to show—1st, the alteration of the fluids in disease; 2dly, the possibility of obliterating the aorta, without producing the death of the lower limbs; 3dly, the diathesis or general disposition, known by the appellation "cancerous disposition;" 4thly, the origin of cancer from other than inflammatory causes.

Remarks on some of the Phenomena of Inflammation, as they appear on Dissection.

For a considerable period, the fluids of the body were considered as the seat of diseases; at present they are believed to be seated in the solids or tissues. But can we now say, with all the additional light which has been of late thrown on diseases in general, that the blood, which performs so important functions, and which constitutes so large a portion of the body, is not affected by disease? and if so, have we any proofs of its not being primarily affected?

The opinions of authors regarding the supposed proximate cause of inflammation, seem to have been regulated by these two opinions. At one time it was supposed that it might depend on a congestion of blood or humours in the part, the large globules of blood plugging up the smaller vessels: whilst at present many believed that the proximate cause of inflammation may depend on a spasm of the extreme vessels, on a diminution of the muscular power of the arteries, or on an increase or diminution of the power of the capillary vessels of the part. Each of these opinions may be in part true, but it seems more probable to suppose that their authors either have imagined what might suit their own ideas, or have considered one of the primary effects of inflammation as its proximate cause.

It is the capillary vessels which are the seat of inflammatory diseases, but their great minuteness renders it impossible for the anatomist to examine them by the usual means, and the result of the observations made by the microscope are so often contradictory, that little reliance can be placed on their accuracy. It is not my intention to speculate on this very obscure, although most interesting subject; but, probably it may be allowed me to infer that the structure and functions of veins are nearly the same at different parts of their course, and that consequently the diseases of the different parts resemble each other.

By observing then the phenomena of inflammation in the large veins, it appears to me that some conclusions may be drawn as to the diseased change in the extreme vessels. When a vein has been wounded, as in bleeding, it sometimes happens that it inflames, the wound does not heal, and a discharge of a purulent fluid takes place from the orifice. This I have seen happen twelve hours after the operation of phlebotomy; and, although a considerable wound remained open in the vein, it did not bleed. The inflammation extended, and the patient was destroyed without his having had any hemorrhage from the wounded vein. This absence of hemorrhage might be supposed to be owing to the adhesion of the opposite sides of the vein; but, on examination after death, it was found to be produced by the vein being plugged up by consolidated* blood, some distance above and below the wounded part. In the same manner may be explained the reason why hemorrhage does not take place when a part is destroyed by mortification,—from the inflammation which preceded this state producing a consolidation of blood in the vessels. A few days ago I had an opportunity of seeing an interesting example of this kind at St. Bartholomew's Hospital, in which the extreme parts of the body had mortified without any assignable cause. When the body was examined after death, it was found that the principal veins of these parts had their vasa vasorum enlarged, their coats thickened, and the internal surface of a deep red colour, which was firmly attached to a consolidated portion of blood, which completely obstructed the vessels.

Such a consolidation of blood appears to be a constant effect of a certain degree of inflammation in the branches of veins; and, as the structure and contents of these vessels seem to be the same, may I not be allowed to infer that the same cause will produce the same effect, and that, therefore, a like consolidation of blood takes place in the capillary veins? This is not a mere speculation, as various proofs might be brought forward in its support. The cause of inflammation acting on the capillary vessel produces this consolidation of blood which impedes the circulation in the vessel; and, as the effect increases in extent, other changes in the part are the consequence. The arterial vessels continue to secrete, whilst the veins do not absorb in the same proportion, and a swelling is the consequence: the arteries meeting with an impediment in the part, propel their contents with greater force; whilst the smaller branches enlarge, to carry on this imperfect circulation, and produce the redness of the part.

It is on account of these changes that the power of absorption is diminished in inflamed parts, and that they are injected with much greater difficulty than in the healthy state.

It is the absence of this consolidation of blood which constitutes the difference between parts which may exhibit some of the phenomena, but not all, of inflammation, and parts which are actually inflamed: thus we explain why the determination of blood to the uterine system during pregnancy, or to the stags' horns during their growth, is not a state of inflammation. In the same manner, the influence of the mind on particular parts, as on the face in blushing, or on the erectile tissue, producing a determination of blood and other characteristic phenomena of inflammation, without the part being in that state, as the blood is not consolidated in the vessels.

THOMAS A. WISE.

St. Bartholomew's Hospital; February 10, 1827.

Salivation speedily produced by Inhaling Mercurial Vapour.

Sir,—If you think the following circumstance worthy of a place in your interesting Journal, you may insert it. I would only premise, that the correspondent, Captain Sykes, of the Indian army, is an accurate and faithful observer. In a letter which I have lately received from him, dated at Poona, on the 28th of August, 1826, he says—

"An accident occurred in my laboratory on the 6th of August, which has led to the knowledge of a fact with respect to the native practice of medicine, which I believe to be new. I had occasion to distil some very impure mercury, for the purpose of filling my barometers. Some lime was put into the iron retort, together with the mercury; the receiver was properly luted on, and a charcoal fire applied. Being suddenly called away, I did not hesitate to leave the apparatus under the charge of a Hindoostanee moonshee, who pretends to knowledge of alchemy, he having succeeded perfectly in a similar distillation a few days before. On my return to the laboratory in about two hours and a half, I found every thing in it, and in the office (an adjoining apartment), as well as the people in both places, covered over with a bluish grey powder, which, on being swept together, formed globules of mercury. There were six persons in the two rooms: the moonshee, and a native who supplied the furnace, were in the laboratory; and four persons were in the office, two seated on chairs, and two on carpets on the floor. In the partition-wall between the two apartments, there is an open door, and two open windows. I found the moonshee and the English writer complaining of tenderness and pain under the jaws, and soreness in the joints. The English writer had been seated on a chair, above the level of the retort, in the office; and the moonshee had been standing near the furnace. The man who supplied the fire did not complain at the time, but in three hours he was reported to be ill, and unable to move. The other persons had no complaint at the time; but next morning, at ten o'clock, the whole six were suffering from sore mouths, and the severity of the symptoms seemed to be in the ratio of their distance from the retort at the time of its explosion, and of the elevation of their heads above its level. He who supplied the fire had his head and fauces so much swollen, that he could not speak; the moonshee and English writer were suffering severely; and a European writer, whose system had resisted forty grains of calomel a-day, had been spitting all night. The two who had sat below the level of the retort suffered much less than the others. My friend, Dr. Ducat, satisfied himself that they were cases of mercurial salivation, and of very unusual severity particularly in the person who had supplied the fire.

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* I employ this word in opposition to the term coagulation, which is generally employed for designating the chemical changes which the blood undergoes when removed from the system.

"It appeared that, in the progress of the distillation, some lime had got into the tube of the retort, and thus prevented the passage of the mercurial vapour, which had forced its way by the side of one of the screws by which the tube was fixed to the retort, and, diffusing itself through the air of the apartments, had been inspired by the men.

"The retort originally contained about six pounds of mercury, whereof half had escaped in the form of vapour.

"This is the twenty-second day since the accident occurred, and all the people are well, with the exception of the man who supplied the furnace.

"Our medical men produce salivation in twenty-fours, by fumigation; and I have heard of a recent instance of salivation being produced in seven hours, by fumigation.

"My Shastree, a learned Bramin, asserts, that the practice of producing salivation by means of mercurial vapour inhaled by the lungs has been used by the Hindoos from time immemorial. Bees'-wax is melted, and spread over stripes of thin cotton cloth; an equal quantity of cinnabar, in the form of powder, is spread over the waxed stripes of cloth, which are then rolled up in the shape of candles. The person to be salivated is seated on his haunches on the ground; a blanket is thrown over him; the lighted cinnabar candle is placed under the blanket, so that he inhales the mercurial vapour. A finger's breadth of the candle is burnt to salivate a boy; three or four fingers are required for a lad, and six for a robust man.

"When I expressed some doubt of this practice being of such antiquity among the Hindoos, my Shastree pointed out a passage in the 'Shaarungu Dhur,' an ancient Shanscreet work, in which the process is described."

I remain yours truly, W. SOMERVILLE.

22, Princes Street, Hanover Square.

Practical Remarks on the Utility of Fumigations.

Upwards of three years' exclusive practice with this remedy enables me to lay before the profession some of the results derived from this experience. Concise as these observations may be, I beg to state they are such as may be relied on by those of the profession who have not yet given much of their attention to the subject: to those, on the contrary, who have been in the habit of resorting to this remedy, the subsequent statements will probably contain nothing new.

Many of the profession, either from cautious scepticism or occupation, have neither leisure nor inclination to enter into the details of the process, or of its merits. This may be readily excused when it is considered in what an empirical way, and with what vain pretensions the remedy was first introduced in this country; but such persons cannot have read the conclusive evidence on this subject, by the most distinguished of the faculty and official authorities of the neighbouring continent.*

In these observations, I shall not be deterred from stating in what diseases, or in what stages of disease, my experience with this remedy has been, and continues to be, at variance with the official reports of those authorities. In doing this, I feel I shall not detract from the merits of the remedy; for, if it is curative of only one disease, that is sufficient to establish it on a firm basis. To the encomiums bestowed on this remedy, I add my humble testimony, as far as the treatment is confined to most diseases of a chronic nature; those of the simpler kind, the fumigations are frequently sufficient to cure without the aid of medicine: but, on the contrary, for those of the acute type this remedy is altogether inadmissible, without the conjunct aid of the customary appropriate medicines. This will show how necessary it is to discriminate the cases submitted to this mode of cure; for the rationale of which I must refer the readers to former communications of mine on the subject, and to the authors before quoted. Without judicious selection in the cases submitted to this remedy, though so valuable a one, it may be the source of the greatest mischief.

In the under-mentioned chronic diseases of the skin, I have not found the remedy, as usually administered, to be so decidedly efficacious as stated by the authorities referred to.

In Prurigo Senilis, and other pruriginous complaints, the fumigating bath, at the usual temperature, (from 110 to 120 Fahr.) I have conceived to be a source of too much excitement, frequently producing aggravation of the complaint; but when the patient is submitted to what I may call a cold fumigation, (say as low a temperature as will disengage the sulphurous gas,) the troublesome itching quickly yields.

In Psora, (which term I would confine to the vesicular and papular stages of itch,) I believe this remedy possesses no advantages over the customary modes of cure; save that by this mode may be avoided all the unpleasantness of confinement, dressing with ointments, &c. I have generally found seven baths the average number required to effect the cure; and, the quicker they are taken in succession, the more speedily will this take place.

In Scabies Purulenta, in the early stages, when the pustules have a raised, inflamed, hardened base, this remedy does little good, unless assisted by frequent purges. In the latter or mixed stages of this complaint, Scabies Cachectica, the remedy is decidedly more useful. Medicines had likewise better be conjoined; and even then the complaint is liable to return in the spring and autumnal seasons.

In all the dry, rough, and scaly diseases, this remedy is comparatively beneficial in the order in which they follow—Ephelis, Pityriasis, Icthyosis: these complaints yield with the greatest facility, though of ever so long standing. In Psoriasis, particularly of old date, this remedy is equally serviceable; but, when resorted to in the early stages, as one part gets well, there are frequently fresh attacks of the disease in other parts, which however progressively get well.

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* See Memoirs and Reports on the Efficacy of Sulphurous Fumigations, from the French; published by order of that Government, and translated by REES PRICE. 1818.

Observations on Sulphurous Fumigations, by WILLIAM WALLACE, Professor of Anatomy and Surgery. Dublin, 1820.

Researches on Chlorine Fumigations, by the same Author. 1822.

The Utility and Importance of Fumigations considered, by the Writer of this Paper. 1826.

In the various degrees of Lepra, from Psoriasis to Elephantiasis, I believe this to be the best auxiliary remedy that can be resorted to; but, with all the aid of therapeutic agency, every practitioner knows the obstinate nature of these diseases. The spots and patches of these disorders, at first, I generally find extend under the use of this remedy; then become pale in the middle, gradually forming a large ring, which becomes broken through in parts before they disappear. I find this process facilitated by occasionally touching the edges with a pencil moistened with dilute acid.

In the Moist or Impetigonous Complaints of the Head, this remedy shows its advantages in a very short time. A lady, (a patient of Dr. **Gordon** and Mr. **Brodie**,) seventy-four years of age, was covered from the head to the insteps as if she had had a blister over the whole of the body. The disease had existed eighteen months; various judicious courses of medicine had been unavailing. She commenced this remedy, and in three weeks became well. She took the fumigations in quick succession, one daily, with but little medicine during the trial, save occasionally an aperient.

In Impetigo, this remedy is eminently successful, but it is surprising to observe the various characters the disease sometimes assumes before it yields. I have had patients covered with impetigo, and before the ichorous discharge had quite subsided, ringworm in various parts has appeared,—in other parts pustules,—and again vesicles, varieties of herpetic appearances, and intertrigo, have followed each other, not observing any regularity; and frequently all these appearances have been distinct on the skin at the same time. The vesicles will come and disappear in a few hours; and the pustules are seldom painful; they maturate and die generally in twenty-four or forty-eight hours, if the fumigations are continued: indeed, in the progress of amendment in this complaint, I have seen the skin put on almost all the varieties of cutaneous disease,—each successively giving way to this remedy; for with these patients medicines have usually been given up as of little service. On the contrary, for diseases of the order Exanthemata, or eruptive diseases attended with fever, this remedy is inadmissible without the conjoint aid of medicine; and even then, as such diseases are generally of short duration, and curable by the usual means, I think this remedy may be as well omitted.

In Ecthema, where the inflammatory appearances are superficial and partial, showing as it were the want of power in nature to throw off the offending cause, and in those diseases consequent on Syphilis, or arising perhaps from the abuse of mercury, this is a remedy strongly to be advised. A weak state of constitution should not prevent its trial or adoption, for the judicious application of the remedy is decidedly tonic. *In short, I would say, for chronic cutaneous disease, this is the best remedy that can be resorted to; and in all diseases of the skin it is an auxiliary deserving consideration, as it does not prevent the administration of the customary modes of cure, but, from the temporary impulse that is occasioned to the whole of the animal functions, medicines are rendered more effectual in their operation.*

The generally received opinion, that this remedy is indicated for skin diseases only is to be regretted. It is for chronic diseases generally, and those of an anomalous nature, that this remedy ought to be valued, and, as a safe and useful auxiliary, should not be lost sight of. I do not hesitate to affirm, that this remedy is, comparatively speaking, less serviceable for skin complaints than for those I have just named.

Fumigations, it should be recollected, are not confined to the gas from sulphur only: chlorine and mercurial gases, and the vapour from narcotic or aromatic vegetables, can with equal facility be administered. The process consists in the patient's being seated in an apparatus, which is kept at about 98 or 100° Fahr., so that the patient shall not feel cold on entering the box. After he has been thus seated four or five minutes, the capillary vessels of the skin are forced into increased action, the pulse quickens, becomes full, though always soft, as the blood is equally distributed, and made to circulate in the most minute vessels on the surface; the face becomes flushed; and, during this quickened action of the bodily functions, the gas or vapour ascends from beneath the patient, surrounding the whole of the body,—the face only being excluded. The patient remains in the box about twenty minutes: during the last eight or ten he is under the full excitement of the bath; the absorbent system, simultaneously with the exhalants, are in encreased activity; and, agreeably with physiological conclusions, the medicines are absorbed during this state of excitement; but more particularly is this the case when there is abrasion on the surface of the skin.

This excitement, if continued too long, would be mischievous; but the temporary acceleration that is thus given to the circulating fluids is found to be a mean of treating with success many simple diseases, and a process by which the powers of medicine are much aided in complaints of a more obstinate nature,—as in obstructions of the glandular system, torpor or inactivity of the liver, the varieties of rheumatism, atonic gout, headaches, skin complaints, &c.

The benefit that is to be derived from the use of the simple warm air bath, likewise deserves to be considered. When I first began to pay attention to this subject, I soon became impressed with the greater degree of exhilaration and comfort that usually follow the use of the dry bath, compared with the feelings after the use of the vapour bath, which are frequently those of languor. To this difference my attention was afterwards more particularly directed by the late Mr. PEARSON, of Golden-square, who was always in the habit of directing the dry bath for those cases where debility was a prominent feature, or where there was languid circulation and deficient secretions. I have many times had reason to be satisfied with the preference given to these dry baths, under circumstances in which I am certain the vapour baths would not have been so beneficial. Mr. Pearson conceived that the moisture in the vapour bath, covering the surface of the body, might prevent the free action of the exhalant and other capillary vessels of the skin.

I shall conclude these observations by saying, that there are very few diseases for which these baths may not be found an useful auxiliary, except in organic diseases of the heart and its contiguous vessels, and in visceral inflammation. The temporary impulse given to the circulation augments all the secretions, and by so doing gives essential aid to the powers of medicine. I have had two cases of tertian ague, each of which had existed for more than a year, in which these baths proved successful. The patients were placed in the simple hot air bath on the commencement of the paroxysm, which remedy was, in both instances, completely effectual in preventing a recurrence.

J. GREEN.

Great Marlborough Street; February.

Case in which Constitutional Effects arose from the external Application of Belladonna.

The following letter is from Mr. WADE, Apothecary to the WESTMINSTER DISPENSARY:—

Sir,—Much has of late been said in favour of the Extract of Belladonna as an external application, and, from its unquestionably, in many cases, powerful effect in diminishing irritability and excessive vascular action, it has a fair chance (considering the attention it has lately excited) of becoming a fashionable remedy in superficial inflammations. At present its powers are apparently much over-rated; for, as is the case with every thing in medicine which has even a show of novelty to recommend it, many virtues are attributed to it, and its faults, if seen, are overlooked, and considered as the result of our own mismanagement. The remedy will soon, however, find its proper level; and, in the hope of preventing its indiscriminate use, I am induced to relate the following case, which will be sufficient to show that, when used to abraded surfaces, the effect of the extract requires vigilant attention.

A gentleman consulted me lately, who had been annoyed for a long time with an obstinate cutaneous affection (Psoriasis) on the fore part of his wrist; the patch was about two inches and a half in length and breadth. Having learnt that almost every means of relief, both constitutional and local, had been tried with but little benefit, and having seen the Belladonna of use in similar cases, in which no absorption was evident, I was induced to recommend its trial in this. A plaster made with one part of the extract to two of soap-cerate was applied to the sore. About thirty-eight hours after its application, I was sent for, during the night, to this patient; whose countenance, on my arrival, expressed much alarm; his pulse was small and quick. He informed me that he had felt very languid during the previous day, and had taken his dinner without appetite; in the evening, he was much distressed by extreme distention of the stomach and bowels, giddiness and weight in the head, with dimness of sight. To relieve the distention of stomach, he took a glass of brandy and water, which produced great excitement, with extreme restlessness, which increased after his retiring to bed: he had constant nausea and retching, with a burning sensation in the throat. I found him sitting up in bed, making strong and ineffectual efforts to vomit: the pulse was small and frequent; the eyes had a dull, heavy expression; the pupils were much dilated, and had little action. The mucous membrane, from the transverse palatine suture, extending down the throat as far as could be seen, was of a deep purple hue. He complained of much giddiness, with an appearance of mist before his eyes; and said that, when attempting to get out of bed, his legs had failed him.

As the sense of distention was very distressing, and supposing that scarcely any digestion of the food last taken could have occurred, the muscular power of the stomach being apparently nearly lost, as nothing but a little mucus had been thrown up, I desired a strong emetic to be given to him, followed by full doses of ammonia. A considerable quantity of undigested food was soon vomited, which afforded much relief.

The restlessness, and burning sensation in the throat, continued more or less during the night. In the morning, but little uneasiness of stomach remained; the mucous membrane of the throat was of a dark crimson colour; the tonsils were much enlarged; the heat had, however, much diminished; the pulse was now sixty-five, full and soft; the pupils continued dilated. The patient complained chiefly of languor and a slight dimness of sight. The bowels had acted freely.—The ammonia was continued, and a capsicum gargle used to the throat.

It is useless to occupy more time in describing the symptoms or treatment, as all the ill effects of the Belladonna had in three days completely subsided.

A doubt might have existed in this case, whether the symptoms were really caused by the Belladonna, had not the patient himself settled this point beyond all question by again applying the plaster; being very anxious to get rid of his disease, and thinking that the symptoms might have arisen merely from a disordered stomach. It had not been applied many hours before the giddiness, dimness of sight, and langour, in some degree returned; but which quickly disappeared on the removal of the plaster.

January 16*th*, 1827. R. WADE.

MONTHLY LIST OF MEDICAL BOOKS.

[No books can be entered on this List except those sent to us for the purpose; as, in the list hitherto transmitted, the names of works have frequently been given as published, which have not appeared for weeks, or even months, after.]

Outlines of Human Physiology. By Herbert Mayo, Surgeon, and Lecturer on Anatomy.

Appendix to the Papers on the Nerves, republished from the Royal Society's Transactions, by Charles Bell: containing Consultations and Cases illustrative of the Facts announced in these Papers.

On the Treatment of the more Protracted Cases of Indigestion. By A. P. W. Philip, M.D. F.R.S. L. & E. Being an Appendix to his Treatise on Indigestion.

Observations on the Treatment of Gonorrhœa by a new Preparation from the Balsam of Copaiba; with illustrative Cases. By JAMES THORN, M.R.C.S.

An Introductory Lecture to a Course of Surgery, delivered at the Richmond School of Medicine, Dublin, Jan. 8th, 1827. By R. CARMICHAEL, Esq. M.R.I.A.

A Critical Analysis of the Memoir read by Dr. BARRY before the Academy of Sciences, on the 8th of June, 1825, at the Institute of France, on Atmospheric Pressure being the principal Cause of the Progression of the Blood in the Veins. By HENRY SEARLE, Surgeon.

Observations on the Expediency of instituting a Friendly Association of the Medical Profession throughout Scotland, for insuring a Provision during Sickness and old Age, Widows' Annuities, Endowments to Children, &c. By E. D. ALLISON, Esq.

Proceedings at the Eighth Anniversary Meeting of the Hunterian Society.

Medical Botany, No. II.

METEOROLOGICAL JOURNAL,

From January 20th, to February 20th, 1827.

By Messrs. HARRIS and Co. Mathematical Instrument Makers, 50, High Holborn.

January	Moon.	Rain gauge.	Thermom.			Barometer.		De Luc's Hygrom.		Winds.		Atmospheric Variations.		
			9 A.M.	MAX.	MIN.	9 A.M.	10P.M.	9 A.M.	10P.M.	9 A.M.	10P.M.	9 *a.m.*	2 *p.m.*	10 *p.m.*
20			28	34	25	30.08	29.90	96	86	E	E	Fair	Fair	Snow
21	☾		27	28	26	29.72	29.57	84	95	NE	N	Snow	Snow	—
22			29	29	21	29.45	29.52	95	85	E	NNE	—	—	Fine
23			28	30	28	29.52	29.41	90	98	NNW	W	—	Fair	Cloudy
24			30	33	28	29.46	29.52	90	93	WSW	SW	Cloudy	—	—
25			31	31	18	29.52	29.58	93	98	E	ENE	Foggy	—	—
26			28	33	30	29.58	29.68	98	88	W	N	—	—	Some S.
27	●		33	34	25	30.03	30.15	81	89	NNE	NNE	Fair	—	Fair
28			33	42	42	30.05	29.84	87	96	SW	SW	—	—	—
29			44	46	35	29.79	29.75	98	90	SW	W	Cloudy	—	—
30			39	41	39	29.67	29.63	90	88	SSW	SW	—	—	Cloudy
31			42	46	42	29.61	29.62	98	98	SSW	SSW	Sm. Ra.	Cloudy	—
Feb.														
1			43	44	35	29.64	29.67	96	96	SSW	NNE	Cloudy	—	Sm. Ra.
2			36	42	29	29.81	29.96	81	85	ENE	N	Fair	—	Fine
3	☽		32	34	27	30.30	30.40	75	79	NE	NE	—	Fair	—
4			36	38	34	30.41	30.40	79	81	NE v.	NNE	—	—	—
5			36	38	28	30.36	30.27	83	84	ENE	ENE	—	—	Fair
6			33	41	34	30.16	30.21	93	90	NNE	NNE	Sm. Ra.	—	—
7			37	41	30	30.29	30.31	90	85	NE	NNE	Fair	—	Fine
8			35	37	29	30.34	30.35	78	80	E	NE	—	—	—
9			32	36	28	30.24	30.18	77	75	ENE	NE	—	—	— —
10			34	37	30	29.97	29.93	82	87	NE	NE	—	—	Cloudy
11	○		31	33	31	29.72	29.69	86	86	ENE	ENE	Cloudy	Cloudy	—
12			36	39	33	29.74	29.87	92	84	NE	NW	Sleet	—	—
13			35	38	28	30.00	30.17	82	80	NNW	NW	Cloudy	—	—
14			34	40	34	29.94	29.85	82	82	WSW	WNW	—	—	—
15			36	38	24	29.89	29.92	87	85	NNE	NNE	Sleet	Fair	Fine
16			25	31	20	30.02	29.96	82	80	ESE	WNW	Fair	—	—
17			22	30	19	29.83	29.87	85	88	WSW	SW	—	—	Foggy
18			26	30	24	29.94	29.93	82	82	E	ENEv	Fine	—	—
19			26	28	24	29.81	29.66	82	81	ENE	ENE	—	—	Fine

The Rain-gauge having frozen, no account was taken of the quantity of Rain fallen.

NOTICES.

Numerous Communications from Gentlemen resident in London have been privately acknowledged.

The Communications of Dr. Heineken, Mr. Cox, Mr. Mackie, Mr. Smith, Mr. Allison, *and* Mr. Mackenzie, *have been received.*

We are much obliged by, and shall avail ourselves of, Dr. Forbes's *polite offer.*

Anatomy of the Nail. (**See Sir A. Cooper's Paper.**)

Page 280.

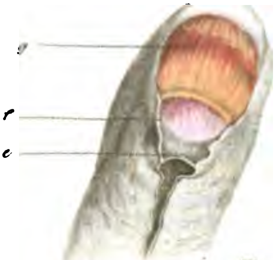


Fig. 3.

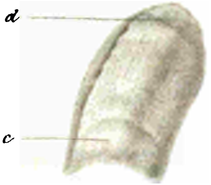


Fig. 2.

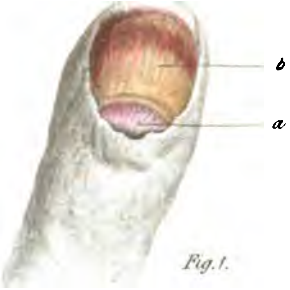


Fig. 1.

Catarrho-Rheumatic Ophthalmia. (*See Prof.r Mackenzie's Paper; Case VIII.*)

Fig. 1.

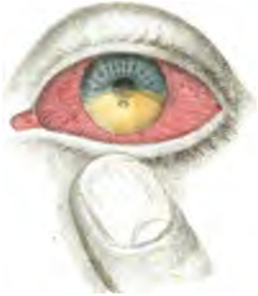
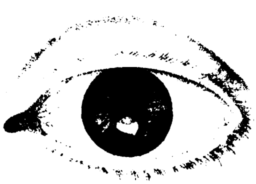


Fig. 2.



H. Adlard Sc.

THE LONDON
Medical and Physical Journal.

Nº 338, VOL LVII.] APRIL, 1827. [Nº 10, New Series.

For many fortunate discoveries in medicine, and for the detection of numerous errors, the world is indebted to the rapid circulation of Monthly Journals; and there never existed any work, to which the Faculty, in Europe and America, were under deeper obligations, than to the Medical and Physical Journal of London, now forming a long, but an invaluable, series.—RUSH.

ORIGINAL PAPERS,
AND
CASES OBTAINED FROM PUBLIC INSTITUTIONS AND OTHER AUTHENTIC SOURCES.

DISEASE OF THE NAILS.

Observations on the Anatomy and Diseases of the Nails.

By Sir Astley Cooper, Bart, &c. &c.

[WITH AN ENGRAVING.]

In reply to your inquiries of what I have so long taught upon the diseases of the nails, and the structure by which they are produced, I with pleasure send you the following account; although that part which relates to their diseases you will find in my published lectures, and the anatomical description has been given in my anatomical course.

Of the Nail.—When this part is separated by putrifaction, and its internal surface is examined, it is found to be divided into three parts: viz.—1st, a hollow and nearly smooth white surface, at its root; 2dly, a hollow white laminated surface, in its middle; 3dly, a hollow, brownish, and less distinctly laminated portion, near its extremity.

Of the Ungual Surface beneath the Nail.—This is divided into two parts. Opposite to the hollow at the root of the nail is placed a highly vascular and villous surface, which I call the ungual gland, and the portion of the nail over this surface is thinner than the rest. Beyond this secreting surface appear a number of laminæ, like the under part of the mushroom, which are parallel with those placed in the inner part of the nail, and which pass in the direction of the axis of the finger. The parts of the nail usually cut project beyond these laminæ.

The ungual gland is a very vascular surface, and its use is to secrete the nail, which proceeds from it between the laminæ placed before it; so that the nail grows from its root, as may be easily seen by cutting a notch there, which grows gradually out in about three months, advancing until it reaches the extremity of the nail. The growth of a new nail also illustrates this position.

The laminæ situated anteriorly to the secreting surface, and upon the third phalanx of the finger, are highly vascular, as far as the adhesion of the nail extends; but beyond this the cuticle of the end of the finger turns in to unite itself to the laminæ. Their vessels are arteries and veins, the latter of which form a plexus, with very frequent communications. The nail adheres to the finger by the cuticle, and it therefore separates by putrefaction and boiling: it also adheres at its root to the secreting surface which produces it; and, above all, it adheres by its laminæ being received between the living laminæ beneath. Opposite to the root of the nail, the cutis and cuticle are double, and turn inwards; so that a considerable portion of the nail is covered by the common integuments. The cuticle unites to the nail; the cutis passes under it, to produce the secreting surface and laminæ,—it is vascular and villous, that it may secrete the nail; vascular and laminated, in order to produce the adhesion of the nail to the skin.

On the diseased Growth of the Nail.—The nail sometimes grows broader than it ought, and it then produces ulceration by the pressure of its edge, which is followed by an irritable and fungous granulation. As this state arises from the breadth of the nail, and its consequent pressure, it sometimes continues for months, or even for years; yet it will yield to proper treatment in two or three weeks. The common mode of relief consists in cutting a notch in the centre of the nail; in scraping its extremity thin; in putting it frequently in warm water, and in putting a piece of lint under its projecting edge: but this mode often fails in producing a cure, and frequently is only a temporary relief. In obstinate and difficult cases of this unnatural growth of the nail, I have, for thirty-five years, recommended and practised the plan of cutting away the edge of the nail with scissors, from its extremity to its root; by which a cure is often produced in a few days, and in the worst cases in two or three weeks. A poultice only is afterwards required.

Of Disease in the Ungual Gland.—In diseased states of the constitution, the secreting surface which produces the nail gets into a morbid state, and, instead of a healthy nail being formed, it throws out one which is black, everted, unadherent, and which so irritates the vascular surfaces as to produce an irritable, sloughing, and very painful sore, which renders the patient lame, so as to prevent his gaining his daily bread. As this is a constitutional as well as local disease, it becomes necessary to employ constitutional and local means of treatment. My usual plan is to give a grain of Calomel, with a grain of Opium, night and morning, with the Decoctum Sarsaparillæ Compositum; and to apply the Liquor Calcis ℥iv. with Calomel ʒj. by means of lint with oiled silk over it. This plan often succeeds; and, if it does not, it destroys the predisposition to the disease.

After giving these constitutional remedies, if the sore does not heal, I have sometimes applied a blister to bring off the nail, and alter the action of the ulcer. But in hospital practice, where persons are anxious to return to their labour, and to have their disease quickly and effectually removed, I have always dissected away the secreting surface which produces the nail, and prevented the possibility of a recurrence of the disease.

The plate which accompanies this will serve to illustrate the anatomy of the parts.

Description of the Plate.

Fig. 1.—*a*, Secreting part,
b, Laminæ.

Fig. 2.—*c*, Hollow for the gland, or secreting part,
d, Projecting part.

Fig. 3.—*e*, Skin turned under the nail,
f, The secreting surface,
g, Laminæ.

The skin turned under the nail becomes, by change of structure, the secreting surface.

New-street, Spring Gardens; February 7th.

CATARRHO-RHEUMATIC OPHTHALMIA.

Practical Observations on Catarrho-Rheumatic Ophthalmia; with Cases. By **William Mackenzie**, Andersonian Professor of Anatomy and Surgery, and one of the Surgeons to the Glasgow Eye Infirmary.

[WITH AN ENGRAVING.]

Since the publication of my paper on Rheumatic Ophthalmia, I have received a communication from a surgeon in London, who for many years has devoted much of his attention to the diseases of the eye, in which he puts the following query—"What do you mean by *rheumatic* ophthalmia?" To which I should reply—

1. I mean simply inflammation of a fibrous tissue of the eye (the sclerotica), and of the surrounding parts of similar structure, excited by atmospheric changes.

2. I do not believe it to be an inflammation differing from common inflammation *in kind*, in consequence of the existence of what has been called the rheumatic habit or diathesis. When atmospheric influence produces catarrh, we never hear the occurrence referred to a mucous diathesis; nor, when pleuritis arises from the same cause, do we attribute the disease to a serous diathesis. The same exciting cause, affecting a fibrous, instead of a mucous or a serous membrane, produces a new train of symptoms, dependent not on the constitution of the person, but on the structure and functions of the part attacked.

3. Rheumatic ophthalmia frequently occurs in individuals who have never suffered from rheumatism in any other part of the body.

4. When rheumatism quits a joint and attacks the heart, which I have known to prove fatal, we say it is a metastasis from the former situation to the latter; but such a change of place I have never myself observed in regard to the eye. In all the cases of rheumatic sclerotitis which I have witnessed, the disease was primary, whether in rheumatic or in non-rheumatic subjects,—never metastatic.

5. I have taken on trust from **Beer** and **Wardrop** the term "rheumatic ophthalmia," lest I might shock the reader by a new name; yet "sclerotitis atmospherica" would be a truer appellation. This inflammation of the eye, however, resembles rheumatism in its exciting causes, its accompanying pain, its exacerbations, and its cure. It has been less generally recognised as a rheumatism, and some may even doubt that it is a rheumatism at all,—probably because it attacks a structure which is seen, a structure covered only by a thin semi-transparent membrane, and therefore exposed

to direct examination: while the other seats of rheumatism, unlike this, are hid from our view by the whole thickness of the common integuments, and are the subjects, therefore, more of conjecture than of actual observation.

In two former communications (October 1826, and January 1827,) I described the pure catarrhal, and then the pure rheumatic ophthalmia, and illustrated the symptoms and treatment of these two diseases by cases, which I had treated publicly at the Glasgow Eye Infirmary, and which are recorded in the journals of that institution. I now proceed to the Catarrho-rheumatic Ophthalmia. In this disease, the conjunctiva and sclerotica are attacked simultaneously: the former membrane by blenorrhœal or catarrhal, and the latter by rheumatic inflammation. In this ophthalmia, then, the symptoms of the two diseases formerly described are conjoined.

One of your contemporaries has remarked, that these are *German* distinctions. I should say, they are natural distinctions—anatomical distinctions—physiological distinctions—practical distinctions, of the greatest importance to all who have eyes to be cured, and to all who intend to cure them.

When we examine the eye, we find its external covering formed by a mucous membrane, liable to profluvial or puro-mucous disease. Beneath it we find a fibrous texture, liable to rheumatic inflammation. In some ophthalmiæ we find the first membrane, in others the second membrane, affected, and in many instances both inflamed at once. We meet with many catarrhal cases of ophthalmia, in which no rheumatic disease is present; we meet with some cases (comparatively they are much fewer,) in which rheumatic sclerotitis exists, with redness, no doubt, of the conjunctiva, but without any catarrhal affection of this membrane. In a third set of cases, both tunics are not merely reddened, but the conjunctiva is affected with puro mucous inflammation, while the sclerotica is severely attacked by rheumatism.

The symptoms of these three sets of cases are strikingly marked; they cannot be overlooked by any practitioner of the least judgment and attention, to whom they are but once pointed out; they are characteristic, to the highest degree, of three different ophthalmiæ, requiring different modes of cure, —three ophthalmiæ, easily subdued if accurately distinguished and discriminately treated, but which, if confounded, are very apt to leave the eye permanently injured, or even deprived of sight. The practitioner who regards these as useless distinctions may, blundering on, light by chance on a treatment which, in an individual case or two, shall marvellously succeed; but to him who knows these distinctions, the treatment is determined and specific.

The German reader will find a section in Professor **Beer's** "Leitfaden," (vol. i. p. 302,) intitled *Idiopathische Catarrhalisch-rheumatisch Augenentzündung*. This is the only notice which I have seen taken of this disease by any author; but, instead of giving a description of catarrho-rheumatic ophthalmia, the learned Professor has entered into a disquisition on the causes and seat of acute and chronic rheumatism, and on the structure and connexions of the investing membrane of the eyelids and eyeball. The complicated affection which I am now about to describe, he passes over almost in silence; and it is to be regretted that in no other part of his most laboured and admirable work does he enter on the symptoms and treatment of catarrho-rheumatic ophthalmia. Yet this is one of the most common of the inflammatory diseases of the eye, and also one of the most severe and dangerous. In old persons especially, it is often the source of permanently diminished vision, and not unfrequently of entire loss of sight in the eye attacked.

SYMPTOMS.

1. As both conjunctiva and sclerotica are affected in this disease, the symptoms are both more complicated, and also more various, than those of the unmixed conjunctivitis and sclerotitis, formerly described.

2. The sense of roughness, which is compared by the patient to the feeling of sand between the eyelids and eyeball, and the secretion of purulent mucus and purulent meibomian fluid, are sufficiently indicative of the part taken in this disease by the conjunctiva. The nocturnal accession of racking circumorbital pain marks the affection of the fibrous sclerotica, the surrounding periosteum, and the neighbouring temporal fascia.

3. In some cases of catarrho-rheumatic ophthalmia, the conjunctivitis is severe, the sclerotitis slight; but more frequently the sclerotitis is severe, the conjunctivitis not so considerable.

4. In this disease the conjunctiva and sclerotica are attacked simultaneously. Occasionally it happens in the course of pure rheumatic ophthalmia, that the patient, from some new exposure, becomes affected also with catarrhal conjunctivitis, as in the case of Mary Scott, page 44. More rarely does an attack of rheumatic sclerotitis supervene on catarrhal ophthalmia. But in catarrho-rheumatic ophthalmia,

both membranes appear to be attacked at once, in consequence of the influence of one and the same exciting cause.

5. In this disease, the redness is evidently both conjunctival and sclerotic. Under the moveable network of the conjunctiva, we perceive the immoveable zonular inflammation of the sclerotica. In pure catarrhal ophthalmia, the sclerotica, no doubt, partakes in the inflammation of the contiguous tunic, but no paroxysms of rheumatic pain are present: the sclerotica suffers sympathetically, not primarily. In pure rheumatic ophthalmia, also, the conjunctiva is reddened, from contiguous sympathy with the structure which it invests, just as the skin is reddened over a joint suffering from acute rheumatism; but neither the conjunctiva in the one instance, nor the skin in the other, is the seat of the primary disease. Besides, in pure rheumatic ophthalmia, the conjunctiva betrays no marks of profluvial disease.

6. Chemosis, or inflammatory œdema of the sub-conjunctival cellular substance, is by no means an uncommon attendant on catarrho-rheumatic ophthalmia. When it does occur, it hides from our view the sclerotic redness.

7. The discharge from the conjunctiva in this disease is never profuse, and seldom opaque. It amounts, in general, rather to a mere increase of mucus, than a flow of pus.

8. The eyelids adhere together in the morning, from the inspissated meibomian secretion. Not unfrequently they are also externally red and swollen.

9. Considerable intolerance of light and epiphora attends this ophthalmia, in all its stages; but especially in those cases where the structure of the cornea is affected.

10. The conjunctival pain, which is compared to the feeling produced by sand between the eyelids and eyeball, is felt most in the morning, or when the eyelids are moved. The sclerotic pain is nocturnal, and observes the same periods of renewal, violence, and abatement, which I have noticed in my paper on Rheumatic Ophthalmia. The conjunctival pain is referred to the surface of the eye, and sometimes to the forehead. The sclerotic pain is circumorbital.

11. In this disease, the cornea is extremely apt to suffer from ulceration, and from effusion of pus between its lamellæ. Indeed, there is no ophthalmia to which adults are exposed, in which ulcer of the cornea and onyx are so frequent, as in the catarrho-rheumatic. If this disease is neglected for eight or ten days, and especially if the patient be far advanced in life, we almost uniformly meet with one or other, and not unfrequently with both, of these symptoms.

12. The ulcer is peculiar. It spreads over the surface,

rarely penetrating deeply into the substance, of the cornea. It generally cicatrises without leaving any opaque speck, the cornea remaining merely irregular, as if part of it had been hacked off with the lancet; and of course vision, from imperfect refraction, is confused. Professor **Beer** and Mr. **Wardrop** have described this kind of ulcer as attendant on pure rheumatic ophthalmia, but I have never seen it except in catarrho-rheumatic cases. Professor Beer mentions that it originates in a phlyctenula, but I have never had an opportunity of seeing any appearance of this kind. If the case continues to be neglected, or if it be mistreated, this ulcer ceases to be superficial; the substance of the cornea is more deeply attacked, and opaque leucoma will be the result. (See Case V.)

13. Onyx, or effusion of pus between the lamellæ of the cornea, is the most alarming of all the symptoms of this ophthalmia. (See Fig. 1.) It generally commences at the lower edge of the cornea, in shape like the white spot at the root of the nails, convex on its upper edge, gradually increasing, mounting upwards, separating the lamellæ more and more between which it is effused, and greatly adding to the sufferings of the patient. It reaches not unfrequently to such a height as to implicate more than half of the cornea. The pus of an onyx in catarrho-rheumatic ophthalmia is very rarely absorbed. The cornea becomes ulcerated over the centre of the onyx, (as in Case VIII. Fig. 1;) the pus is evacuated; the ulcer penetrates through the posterior lamellæ of the cornea; the aqueous humour escapes; the iris falls forward into contact with the ulcerated cornea; in nine cases out of ten, these parts adhere together, and the result is partial or total staphyloma.

14. As the onyx goes on advancing, there is commonly also an effusion of lymph going on in the pupil: the pupil becomes, first of all, less vivid in its motions; the colour of the iris changes; the pupil becomes hazy, contracts as the onyx increases, and may at last be obliterated. (See Case VI.)

15. In some cases, the onyx is accompanied by hypopium, or effusion of pus into the anterior chamber. In other cases, the onyx bursts first into the anterior chamber; false hypopium is thus produced, and ultimately the cornea gives way.

16. If luckily the matter of an onyx be absorbed, albugo remains for a considerable time, but gradually diminishes, and may ultimately almost entirely disappear. If onyx is dispersed by the cornea giving way, leucoma is the result, and never entirely disappears. Staphyloma cannot result,

unless the iris and cornea have become partially or totally adherent. Mr. Wardrop remarks, that partial staphyloma generally affects the inferior half of the cornea.* The reason is, that partial staphyloma is commonly the consequence of onyx, which in nine cases out of ten takes place at the lower edge of the cornea.

17. In catarrho-rheumatic ophthalmia, the pulse is generally quick and sharp; the tongue white, and mouth ill-tasted. The nocturnal pain completely prevents sleep, till about sun-rise. Catarrh sometimes attends, and adds to the febrile symptoms.

18. We generally find that the rheumatic symptoms yield first to treatment; the catarrhal continuing for some days longer. But in some cases I have observed the reverse: the circumorbital pain continuing in a slight degree after all the catarrhal symptoms were gone.

CAUSES.

The causes of catarrho-rheumatic ophthalmia appear to be similar atmospheric influences to those formerly enumerated as giving rise to catarrhal, and rheumatic ophthalmiæ. Amongst the poor, the disease may in general be traced to cold, to which the patients have been exposed, particularly during the night, from deficient clothing and want of proper shelter. Like other inflammatory and rheumatic affections, it is more prevalent during north-easterly winds.

Professor Beer thought that cold draughts of air,† playing upon the eye, excited rheumatic ophthalmia; and that foul air‡ caused catarrhal ophthalmia. According to this view, air at once corrupted and impelled with force against the eye, especially when the head is covered with perspiration, will be the most likely cause of catarrho-rheumatic ophthalmia.

In 1805, at Riding-street Barracks, nearly twenty miles to the interior of Romney Marsh, the second battalion of the 52d Regiment appears to have suffered severely from catarrho-rheumatic ophthalmia. Dr. VETCH attributes the severity of the disease in that situation, and the intermittent form of some of the symptoms, to the influence of the marsh.§

That the discharge from the conjunctiva in catarrho-rheumatic ophthalmia, if applied to the conjunctiva of a healthy eye, will excite a puro-mucous conjunctivitis, is extremely probable, and is supported by such facts as I have recorded in Cases XII. and XIII. of a former communication.* That catarrho-rheumatic ophthalmia can arise from contagion, is extremely improbable. In such cases as that of Coleman and her child, (Case VII. of the present paper,) both patients had been exposed, we may conclude, to the same exciting cause; and, while the one caught catarrhal ophthalmia, the other was seized with the catarrho-rheumatic form of this disease.

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* Morbid Anatomy of the Eye, vol. i. p. 106.

† Eine kalte Zugluft.

‡ Ein zersetzer verdorbener Luftkreis.

§ See VETCH's Account of the Ophthalmia which has appeared in England since the Return of the British Army from Egypt, Lond. 1807, p. 20. Also Dr. A. T. THOMSON's Remarks on Acute Rheumatism, in this Journal for February, p. 123.

Professor Beer mentions that catarrho-rheumatic ophthalmia sometimes occurs in children, and still more frequently in old persons, along with suppression of urine. But he seems to reject the conclusion of some, that this was any thing more than a mere coincidence; and he gives us no hope that diuretics would be peculiarly serviceable, even though they restored the secretion of urine.†

We meet with catarrho-rheumatic ophthalmia much more frequently in old persons than in the young or middle-aged.

TREATMENT.

The successful treatment of this disease does not depend so much on any new remedies, as on a proper selection of some of the means formerly recommended, either for the catarrhal or for the rheumatic ophthalmia.

1. Venesection. This appears to be as necessary in the catarrho-rheumatic as in the pure rheumatic cases; and is attended by as remarkable relief to all the symptoms, especially to the circumorbital pain. According to the severity of the case, and the age and constitution of the patient, from ten to thirty ounces of blood may be taken from the arm; and the same quantity on the day following, if the symptoms are not greatly relieved.

2. Leeches to the temple are also highly useful, particularly when applied soon after venesection.

3. Scarification of the conjunctiva of the eyelids proves useful in cases of chemosis; but produces comparatively little effect, unless practised in the manner described at page 324, vol. lvi.

4. Calomel and Opium. The same good effects are derived from this combination in this ophthalmia, as in the pure rheumatic. The dose, and the length to which the calomel should be pushed, are the same. See page 41.

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* Vol. lvi. p. 329.

† Beer's Leitfaden, vol. i. p. 310.

5. Opiate Frictions on the forehead and temple, about an hour before the expected attack of circumorbital pain.

6. Belladonna, so as to keep the pupil dilated.

7. Blisters behind the ear, or to the nape of the neck.

8. Purgatives; such as a brisk dose of calomel and jalap at the beginning, and a gentle laxative every morning during the course of the disease.

9. Sudorifics; such as Spiritus Mindereri, diluent drinks, the warm pediluvium, and a flannel under-dress.

10. Tonics; such as Cinchona and the Mineral Acids, in the chronic stage of the disease. Under these heads, I have nothing to add to what is stated at pages 41 and 42 of this volume, and at page 325 of vol. lvi.

11. Solution of Nitrate of Silver. As in the catarrhal, so in the catarrho-rheumatic ophthalmia, the solution of from two to four grains of nitrate of silver in one ounce of distilled water, dropped upon the conjunctiva once a-day, relieves the feeling of sand, and speedily removes the other symptoms of conjunctivitis. This application, however, has no effect on the sclerotic part of the disease; and I should conceive it a very dangerous mistake to trust to this remedy almost alone, as we may safely do in pure catarrhal ophthalmia, and to neglect the appropriate means for reducing the attendant inflammation of the sclerotica. See Mr. MELIN's Report, in this Journal for September 1824.

12. Vinum Opii. Before the catarrhal part of this disease is subdued by the solution of nitrate of silver, this remedy rather aggravates the symptoms. After the conjunctivitis and the acute sclerotitis have yielded, it operates favourably, as in the chronic stage of the pure rheumatic ophthalmia; affording thus a good illustration of the remark of BOERHAAVE—" Nullum ego cognosco remedium nisi quod tempestivo usu fiat tale."

13. Collyrium Muriatis Hydrargyri, one grain to eight ounces, to be used milk-warm three or four times a-day.

14. Unguentum Præcipitati Rubri, smeared along the edges of the eyelids at bedtime. These I employ as part of the treatment suitable for the conjunctival part of the disease, according to the directions given at pages 325 and 326 of vol. lvi.

15. With respect to the treatment of onyx, I would recommend the lancet not to be used for evacuating the purulent fluid effused between the lamellæ of the cornea. In every case in which I have evacuated the matter with the lancet, partial or total staphyloma has been the result. In Ferrie's case, (Case VIII.) I left the matter to itself, and certainly

no case could be more alarming in its progress, nor more unexpectedly happy in its results. I attributed the success which attended this case, in a great measure, to the sorbefacient influence of the calomel over the effusion into the pupil, —to the continued use of belladonna,—and to the gradual preparation of the cornea by nature for its giving way, and for its healing up; a preparation which would probably have been entirely defeated, had I ventured, as I had done in a number of previous cases, to open the onyx with the lancet.

Fig. 1, shows the onyx in this case, and the seat of the ulcer by which it was gradually evacuated. Fig. 2, shows the eye after recovery.

CASES.

Case I.—17th June, 1825.—Duncan M'Lean, aged forty-six. Since the 12th, severe pain in the right eye, eyebrow, and cheek, with redness of the conjunctiva and sclerotica, but chiefly of the latter. A superficial ulcer on the lower external part of the cornea. Adhesion of the eyelids in the morning.

Mitt. sang. e brachio ad ℥ xij. vel xv.—Cras mane adhib. Hirudines viij. ad temp. dextram.—℞. Subm. Hydr. gr. v.; Pulv. Jalapæ gr. xv. M. capiat q. p.—Belladonna ad palpebras dextras.

20th.—Pain of the eyebrow and cheek gone, and that of the eyeball much diminished; so that the leeches were not applied. Ulcer of the cornea nearly healed. Pupil about a medium size, but less than the other, and sluggish in its motions.

℞. Subm. Hydr. gr. ij.; Opii gr. ss. M. fiant tales doses vj. cap. j. m. et v.

22d.—Improves.

Vesicat. pone aurem dextram.—Sulphat. Magnes. ℥ jss.—Gtt. Sol. Nitr. Argent. ad oculum dextrum.

27th.—Mouth sore. Eye continues to improve.

29th.—Capiat Pulv. Cinchonæ ℈j. bis indies.

29th July.—Dismissed cured.

Case II.—4th August, 1825.—Robert Anderson, aged sixty-five. Catarrho-rheumatic ophthalmia of eight days' standing, with an ulcer on the lower internal part of the cornea of the left eye.

Hirudines viij. ad temp. sinistr.—℞. Subm. Hydr. gr. v.; Pulv. Jalap. gr. xv. M. capiat q. p.

5th.—Eye easier, and ulcer rather less.

Ung. Præc. rubri o. n. ad margines palpebrarum.

12th.—Inflammation rapidly declining, and ulcer contracting.

Gtt. Solutio Nitr. Argent. ad oculum sinistrum.

1st September.—Dismissed cured.

Case III.—11th November, 1825.—Margaret Young, aged twenty-three. Scattered redness of the left conjunctiva, with a superficial ulcer of the cornea. Pain round the orbit, increased when she is warm in bed. Adhesion of the eyelids in the morning.

Mitt. sang. e brachio ad ℥ xv.—℞. Subm. Hydr. gr. v.; Pulv. Jalapæ gr. xv. M. capiat q. p.

16th.—Symptoms much abated.

Utatur pro collyrio Sol. Mur. Hydr.

19th December.—Has been ill with cold since last report. The symptoms are all much increased. Pulse ninety-six, sharp.

Repetatur V.S.—Sulph. Magnes. ʒiss.

27th January, 1826.—Dismissed cured.

Case IV.—28th December, 1825.—Euphemia Wilson, aged twenty-six. Conjunctivitis catarrhalis of the right eye, of three weeks' standing; at first attended with considerable rheumatic pain of the head and cheek. Eyelids swollen.

Scarif. facies interna palpebr. infer. dextram.—Ung. Præc. rubri ad marg. palpebrarum o. n.

30th.—Gtt. Solutio Nitr. Argent.—Collyr. Mur. Hydr.

2d January, 1826.—Much improved.

30th.—Dismissed cured.

Case V.—20th January, 1826.—Agnes Sharp, aged sixty-six. Has suffered severely from catarrho-rheumatic ophthalmia in both eyes, four months ago. The greater part of the right cornea is leucomatous; the left appears to have been in the same state, but is now ulcerated, and the conjunctiva much inflamed. The left eye is very painful, as well as the upper part of the head and the left temple; left eyelids œdematous.

Extr. Belladonnæ ad palpebr. sinistr.—℞. Subm. Hydr. gr. ij.; Opii gr. j. M. fiant tales doses vj. cap. j. o. n.—Fricetur regio supraorbitalis Tinct. Opii.

22d.—Much relieved.—Vinum Opii.—Cont. Pulv. et Fricatio.

25th.—Ulcer of the left cornea cicatrised.

27th.—Eyes easy.

Omitt^{r} Pulv.—Sulphatis Magnesiæ ℥ j.—Cont^{r} Vinum Opi.

30th.—Inflammatory symptoms gone; but there seems to be no possibility of restoring vision by any species of operation. Dismissed relieved.

Case VI.—3d May, 1826.—Andrew Bain, aged seventy-six. Lost the sight of the right eye when a child, by small-pox. Catarrho-rheumatic ophthalmia, of eight weeks' standing. The centre of the left cornea has been in a state of ulceration, but is now cicatrised: the whole of the left cornea is nebulous; vision very obscure; supraorbital and temporal pain very much gone.

Vinum Opii.—Belladonna ad palpebras.—Oleum Ricini ℥ j.

5th.—Pulv. Doveri gr. x. h. s.—Cont^{r} Belladonnæ et Vinum Opii.

8th.—Sulphatis Magnesiæ ℥ j.—Ung. Præc. rubri o. n.—Cont^{r} Vinum Opii, Beladonnæ, et Pulv. Doveri.

10th.—Left cornea beginning to clear.

15th.—No pain, and can open the eye better, cornea clearing, but vision not returning; bowels confined.

Pil. Colocynth. pro re nata.—Cont^{r} Vinum Opii et Belladonnæ.—Omitt^{r} Pulv, Doveri.

24th.—The pupil, which is now coming into view in consequence of the clearing of the cornea, is exceedingly contracted.

℞. Subm. Hydr. gr. j.; Opii gr. ss. M. fiant tales doses xii. capiat j. m. et v. —Cont^{r} alia.

31st.—The cornea is now so clear as to permit the pupil to be seen: almost obliterated, and filled with an opaque effusion.

7th June.—Cont^{r} Pulv. Subm. Hydr. et Opii, h. s.

14th.—Cornea still clearer, and he begins to see better.

19th.—Powders purge.

Opii gr. j. o. n.—Cont^{r} Pulv. m. et v.

5th July.—Cornea still clearing, but little further improvement in vision.

℞. Subm. Hydr. gr. ij.; Opii gr. j. M. fiant tales doses xij. capiat j. o. n.—Omitt^{r} Pulveres priores.

7th.—Bowels bound.—Pil. Aleot. pro re nata.

10th.—Finds his vision improving, so that he was able to discern Knox's monument last night.

21st.—Purging and pain in the bowels.

Omitt^{r} Pulv.—Capiat h. s. Opii gr. j.—Fricetur regio circumorbitalis Ung. Hydr. Camphorato o. n.—Cont^{r} Vinum Opii et Belladonna.

28th.—Bowels regular.

Gtt. Vin. Opii c. Stramonio indies.—Cont^{r} Fricatio c. Ung. Hydr. Camphor.

25th September.—Has ceased to attend. Dismissed relieved.

Case VII.—5th May, 1826.—Margaret Coleman, aged twenty. Since the 1st, severe catarrho-rheumatic ophthalmia of both eyes, commencing in the left, which is still the most affected. Several small open pustules round the edge of the corneæ, particularly of the left; nocturnal pain from five P.M. till five A.M., worst about midnight; feeling of sand, and pulsating pain in both eyes, with rheumatic pain affecting the supraorbital and infraorbital regions; tongue dry; thirst; pulse eighty-four; adhesion of the eyelids in the morning. Thinks she got this complaint from her child, aged three, who has been affected with catarrhal ophthalmia.

Mitt. sanguis e brachio ad ℥ xij. vel xv., et repetatur V.S. cras, si opus fuerit.—℞. Subm. Hydr. gr. xij.; Opii gr. vj.; Pulv. Glyc. Glab. ℈j. M. divide in pulv. vj. capiat j. o. n.—Fricetur pars capitis dolens Tinct. Opii, m. et v. præsertim ante doloris superventionem.—Collyr. Mur. Hydrarg.

8th.—Did not send for the Collyrium nor Tincturæ Opii.

Gtt. Sol. Nitr. Argenti.—Vesicat. ad nucham, et postea Ung. Resinos.

10th.—Symptoms considerably abated.

Cont^{r} Pulveres et alia.

12th.—Eyes greatly better; no nocturnal pain, but complains of headache in the course of the day; her mouth is affected.

Omitt^{r} Pulv. Subm. Hydr. et Opii.—Sulphatis Magnesiæ ℥ jss.

15th.—Symptoms gone; mouth still sore.

Case VIII.—22d May, 1826.—John Ferrie, aged forty-seven. About three weeks ago became affected with catarrho-rheumatic ophthalmia of the left eye. For eight days past, he has had severe orbital pain during the night. Onyx of the cornea, extending from its lower edge to over the pupil; an ulcer over the middle of the onyx. Much vascularity of the conjunctiva and sclerotica.

Gtt. Vin. Opii.—Belladonnæ ad palpebr.—℞. Subm. Hydr. gr. ij.; Opii gr. j. M. fiant tales doses vj. capiat j. o. n.—Fricentur partes dolentes Tinct. Opii, o. n.—Pediluvium tepidum h. s.

24th.—Feels the eye better, although there is not much evident change in its appearance. Iris discoloured, and an effusion into the pupil.

Contr Pulv. Subm. Hydr. et Opii, m. et v.—Vesicat. ad nuch.—Contr alia.

27th.—Onyx increasing; mouth affected.

Omittr Pulv. matutin.—Hirudines viij. ad temp. sinistr.

31st.—Pupil still contracting.

2d June.—Upper part of the cornea more nebulous; feels the eye more uneasy.

Gtt. Solutio Nitr. Argent.

5th.—The exterior laminæ of the cornea have given way, and discharged a considerable quantity of matter from the onyx. Pupil still more contracted. A feeling of sand in the eye.

℞. Extr. Belladonnæ ʒss; Aquæ ℥ vj. solve, et cola, pro collyrio.

7th.—Vesicat. pone aurem sinistram.

9th.—The aqueous humour has evacuated itself since the 7th, and the iris fallen forward into contact with the cornea. Matter of the onyx almost entirely gone. Says he sees a little better.

Contr Pulv. Submur. Hydr. et Opii.

12th.—Pupil in contact with the cornea clearer, and vision more distinct.—Cont. medicamenta.

14th.—A little aqueous humour between the upper part of the iris and cornea; ulcer of the cornea covered with lymph; all the pus gone.—Cont. Belladonnæ et alia.

26th.—Pupil considerably enlarged, and clear; more aqueous humour between the iris and cornea.—Cont. Solut. Belladonnæ.

30th July.—Pupil clear, of considerable size, and vision good. A minute adhesion between the leucoma and the lower edge of the pupil, not observed when the eye is viewed in front. A slight speck continues in the seat of the ulcer. Dismissed cured.

Spreull's-court, Glasgow; Feb. 1827.

SYPHILIS.

On Syphilitic Pains and Diseases of the Bones. By Cæsar Hawkins, Esq, Surgeon, and Lecturer on Anatomy in the School of Great Windmill-street.

*Recent investigations have elicited an immense number of facts and observations, from which it is sufficiently clear that there is no symptom of lues which may not be cured without mercury; but it remains so to arrange these facts, as to determine, on safe principles, under what circumstances, and in what forms of the disorder, we should have recourse to mercury; and when we ought to give the preference to other modes of treatment.

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* In a former part of this Journal, (Nos. 290 and 291,) I have described another form of syphilitic disease—viz. Ulcerations of the Larynx; on which sufficient attention did not appear to me to have been bestowed.

There can be no doubt that there are many symptoms which are usually considered as the direct consequences of inoculation with the syphilitic virus, but which, in fact, are only secondarily produced by it.

Some confusion of this kind has probably arisen upon the subject of those affections which are usually called *syphilitic pains*; for it is not otherwise easy to account for the fact, that, by the majority of the profession, mercury is still considered essentially necessary for every form and every stage of these disorders: or, if other medicines are used as substitutes for mercury, or to assist its operation, they are employed indiscriminately, and without reference to the nature and situation of the pains.

I am induced, however, to believe that a set of symptoms are commonly classed together under the comprehensive term *venereal pains*, which are essentially distinct from each other in their nature, and which are situated in perfectly different structures; that some of these are comparatively of little importance, while others are exceedingly dangerous in their course. If it be true, then, that this difference of kind exists, it becomes probable that a different mode of treatment will be required: hence an attempt to separate them, and to determine what remedies are appropriate to each form of the disorder, may not be without its use.

Syphilitic pains, or, more properly speaking, painful affections following syphilis, may be divided into four distinct species:

1st. The first are those which have their seat in muscles, and in their tendons and fasciæ.

2dly. Those which arise from disease of the synovial membranes and bursæ mucosæ.

3dly. Those which are situated in the fibrous structure of the ligaments, periosteum, and pericranium.

4thly. The pains which arise from affections of the structure of the bones themselves.

It is true that two, or even all, of these different affections often exist in the same individual at the same time, but it is equally certain that they arise separately in other cases; and discrimination appears to me to be of importance, because some of these symptoms are not strictly syphilitic, and do not require the use of mercury in any case, and the remedies best adapted to one form of pains are useless or injurious in others.

1. *The painful affection of the muscles, tendons, and fasciæ.*—This is a very common occurrence after a syphilitic sore, and is often the only symptom present: it is generally a very early symptom, and thus evidently differs from those other affections which Mr. Hunter describes as constituting the second stage of lues; and it is well designated by the patient—pains in all the limbs.

This must not be confounded with that pain and weariness of the muscles, which often precedes the appearance of a syphilitic eruption, and is commonly removed by the establishment of the eruptive disorder. This latter muscular pain resembles that which is felt in common catarrhal disorders, and is attended with symptoms of febrile excitement, in a much greater degree than in the painful affection to which I am alluding.

2. *Inflammation of synovial membranes.*—The next description of pains which require notice are those which arise from an affection of the synovial membranes of the different joints and bursæ, and the serous linings of the sheaths of tendons; this disease being, in general, readily distinguishable by the situation and swelling of the affected parts.

I shall not occupy the time of my readers by describing the symptoms of either of these two disorders, since they are minutely described in various works on Rheumatism. There is, in truth, no essential difference between the affections of the muscles and joints which occur after syphilis, and chronic rheumatism of the same structures arising from other constitutional causes. Their character and situation, and their immediate causes, seem to be the same in each: their obstinacy and tendency to return, and the little control of medicine over them in many cases, are circumstances which apply to the idiopathic as well as to the specific disease. The proper explanation, no doubt, is, that the irritation of the syphilitic virus upon the system,—the employment of mercury,—and the mental depression for the most part produced in those who labour under venereal disorders, act as predisposing causes, giving a tendency to the production of rheumatic pains, on the application of a proper excitant, which in almost all cases is exposure to cold and damp.

Exactly the same disease occurs after a venereal sore, when no mercury is exhibited,—when mercury is employed for the cure of primary symptoms,—when this medicine is given for other disorders,—and when neither the venereal poison nor its antidote have had any share in the production of the disease. There cannot, therefore, be any reason for retaining the specific name "venereal pains;" and, if so, those who are most attached to the mercurial plan of treatment in syphilis may agree with me, that, for these painful affections of the muscles and synovial membranes, mercury (at least in the form of a regular course,) is in no case to be considered necessary.

For the same reason that I abstained from a description of the symptoms of these diseases, it will be unnecessary to enter into a consideration of their treatment. I shall only remark, that it is in the painful affection of the muscles that guaiacum, which has been extolled for its general antisyphilitic virtues, is chiefly useful; and that, as a general rule, it will be found that sudorifics are most efficacious in these pains, while antiphlogistic remedies, particularly colchicum, together with alteratives, are of most service in the chronic affections of the joints and bursæ.

3. *Of the affection of the periosteum and ligaments.*—The affection of the periosteum varies so much, that no description can apply to every case. It is generally a late symptom of lues, but I have known it to occur as early as two months from the first reception of the poison. Sometimes the pain is very intense, at others scarcely any is felt. In some persons the formation of nodes occurs very early; in others, the pain lasts a considerable time, and no swellings are ever formed. At one time the pain is entirely local, or confined to one or two bones, or even parts of them; at another, every bone in the body shows the existence of the disorder. This is the case in a skeleton in the collection belonging to Mr. MAYO and myself in Great Windmill-street, in which even the vertebræ, pelvis, and phalanges of the fingers, bear some marks of the disease in the periosteum.

There is some difference in the progress of the disorder when it affects the pericranium, compared with the corresponding affection of the periosteum of other bones. This arises partly from the finer texture of the membranous covering of the cranial bones, but principally from the influence of the disease upon the dura mater and the brain. I propose, therefore, first to consider the symptoms and appearance of the disease in the periosteum of the bones of the body generally, and afterwards to describe its progress in the pericranium.

I. There is commonly a dull heavy pain in all the bones of the body, distinguished even by the patient himself from the muscular and synovial affection, by its deeper situation and more fixed character: this is frequently periodical, and the time at which the attack occurs is generally very early in the morning. There is considerable tenderness, which may be detected, even in bones the most deeply situated, by pressure steadily applied in the interstices of the muscles. Restlessness, emaciation, a quick and feeble pulse, indicate great irritability of the constitution, rather than any great febrile excitement.

If the bones are examined after these pains have existed some time, the periosteum is found to be slightly thickened, and more vascular than usual, and the contiguous surface of the bone has not its usual white and shining appearance. The shape of the bone is natural, and the surface is not raised, but when thus affected is slightly softened and more spongy, and consequently more rough, than in its natural state. There is no fluid effused, and the periosteum adheres to the bone with its usual firmness; so that it cannot be said that any ulcerative process has actually commenced, but there seems to be an irregularity in the action of the vessels, preparatory to the formation of caries. If the bones are dried, the same difference of colour and hardness is preserved, so as to give a very peculiar mottled appearance to the bones; these darker patches of a brown colour, and of irregular size and shape, being intermixed with other parts of the bone still possessing the natural white smooth surface. This is most striking in the shafts of the cylindrical bones, but is also apparent in the more spongy bones, as on the bodies of the vertebræ.

In this stage of the disorder, it might admit of discussion whether the disease originates in the periosteum, and the bone becomes secondarily affected, or whether the primary seat of the disease is in the external surface of the bone. Mr. Hunter is of the latter opinion; but, if we consider the usual course of diseases of the bones, and trace the farther progress of this particular disease in the formation of nodes, exostosis, and caries,—and if we observe the pain and tenderness of the entire periosteum, while this appearance of the bones is only partial, there can be little doubt, I imagine, that the periosteum is the structure which is first affected.

At the same time that this disordered action exists in the periosteum, it is not unusual to find the ligaments similarly affected, as we might naturally expect from the resemblance of their structure to that of the periosteum. There can be no difficulty, however, in distinguishing the pain and tenderness around the joints, and the thickening and induration of the ligaments, from the disease of the synovial membranes.

After the disease has existed thus universally for some time, particular portions of the periosteum become more indurated than the rest, and local tumors or nodes are produced. It is not unusual to divide nodes into two kinds, which are called soft and hard nodes; there being in the latter, a simple indurated swelling over the bones, in the former, fluid having been secreted under the periosteum. This distinction is not without its use, if our practice is influenced by it; for I believe it will invariably be found that, where matter is thus formed in the nodes, it indicates a low and cachectic state of the constitution, and consequently points out the danger of employing mercury. But such a division does not at all describe the nature of the tumor, nor its origin; for each of these terms is applicable to a swelling which begins in the periosteum, as well as to another arising from primary disease of the bone.

It is well known that the bones most subject to nodes are those which are most exposed, and that they are usually formed on those surfaces and in those parts which are only covered by the integuments; a circumstance which Mr. Hunter attributes to the joint effect of the application of cold and the hardness of the bone, believing that the bone is the original seat of the disease; but there is an equally perceptible difference in the periosteum of the shafts of the cylindrical bones, compared with that covering the more spongy extremities, to which the inferior liability of the latter parts to form nodes may, with as much propriety, be ascribed.

In a healthy constitution, the periosteum becomes gradually thickened in some particular part, so as to form a tumor more or less prominent; the periosteum remaining firmly united to the bone, but not contracting any adhesion to the integuments. Sometimes the tumors only rise at first during the nocturnal exacerbations, and disappear in the morning: in this stage there is probably only a vascular tumefaction, or some temporary secretion of fluid in consequence of the inflammation. The tumor rises gradually from the bone, and is perfectly uniform and smooth on the surface; being, by these circumstances, easily distinguishable from common exostoses.

If now cut down upon, the node is found to be composed distinctly of the thickened periosteum, having a semi-cartilaginous appearance, in which a few bony spicula are often imbedded. The bone beneath is at first perfectly healthy, but after some time a slight roughness of the surface may be perceived, from incipient ulceration of a healthy character; or the bone itself may rise into the tumor, the osseous growth being merely an increased thickness of the outer harder part of the bone. Irregular tumefactions of this kind are often felt, particularly on the tibia, which continue after all specific action has ceased in the system, and become wholly free from pain and inconvenience.

In a bad constitution, on the other hand, instead of hard tumors, composed of periosteum at first and afterwards of bone, a secretion of matter takes place very early in some of the nodes, between the periosteum and the bone, and an abscess is produced, containing a glairy kind of fluid, of a dark colour. The extent of inflammation in this species of node is often very trifling, so that the matter remains a long time under the periosteum without giving any pain, and without changing in quantity, and is often entirely absorbed. In other cases the skin becomes red, and unites with the periosteum; it then changes to a purple colour, and finally ulcerates, a ring of thickened periosteum being felt around the opening. Sometimes a very small opening takes place, and, as soon as the matter has been evacuated, a healthy action commences, and union is again produced between the bone and the periosteum. A small puncture made early with the lancet is often attended with the same beneficial result. In other cases, caries and exfoliation take place, the progress of which is nearly the same as in similar affections arising from other causes.

II. When the pericranium is affected, there is at first considerable pain in the head, which is followed in a short time by tenderness of the scalp, with slight puffiness, sometimes amounting to actual œdema. The pain is generally greatest in the forehead, where distinct nodes are often produced, which sometimes suppurate. In these respects the disease is similar to the affection of the periosteum in other parts of the body, as well as in the periodical attacks of the pain and the constitutional disturbance. But after some time other symptoms are added. The mouth is frequently observed to be drawn to one side; the sense of touch is diminished in the skin of the face; deafness is produced; the sense of taste is impaired; and the motions of the tongue, eyelids, and lips, are imperfectly performed. Then the faculties of the mind are found to be weakened; the memory is imperfect, and a languor and half-torpid state of the intellect is produced,—sometimes with constant drowsiness: but in some few cases a high state of excitement is present, which causes actual mania. There are occasionally fits resembling epilepsy, spasmodic cough, with convulsions of the limbs, increasing in frequency, but leaving the patient comparatively well in the intervals, till at last some severer fit carries him off suddenly, or he sinks as if from exhaustion.

The progress of the symptoms, which have been thus rapidly enumerated, may be divided into three distinct periods, with which the alteration of structure will be found to correspond. In the first stage, more or less thickening of the external covering of the bone may be perceived, which begins in the pericranium, but also affects the tendon of the occipito frontalis muscle, where they are in contact. The outer surface of the bone may be rough and irregular, and increased in thickness; and matter may be formed beneath the pericranium, in the same manner as in the corresponding affection of the periosteum elsewhere. In the second period, the disease has spread to the dura mater, which becomes thickened like the pericranium, and the inner surface of the bones is also rough and ulcerated; and the nerves, in their passage through their appropriate foramina, are pressed upon, by thickening of their own external coat, and by the irregular growth of the bones and their membranes.

The most striking instance which I have seen of this affection of the nerves, was one which I had an opportunity of witnessing in the Middlesex Hospital some years since, which has also been minutely described by my friend Mr. Mayo, in his "Physiological Commentaries." In this case the affection was confined to the left side of the face, which was œdematous to a considerable extent. The olfactory nerve on this side had lost its powers, and the optic nerve of the same side seemed to be impaired, as the sight of the eye became dim during the progress of the disorder, and the pupil did not change when a strong light was presented to the eye. The third, fourth, and sixth nerves were distinctly paralysed, as the eye was immovable, and the eyelid could not be raised. The muscular branches of the fifth nerve were also paralysed; for, if the person placed a piece of crust between his teeth, the masseter of the right side became hard, but that on the left remained flaccid. The branches of the same nerve which supplied the skin of the face had also lost their functions, since the only part of the face which retained its sensibility was a narrow line supplied by the second cervical nerve. The mucous surfaces of the eye, of the left nostril, and of the gums on the left side, had lost the sense of touch; and the tongue on the left side, when its surface only was irritated, was insensible to touch as well as to taste. The hearing was also deficient; so that the only nerves which at that time remained unaffected were the eighth and ninth pair. It was a curious circumstance that in this case the eye was much inflamed, and superficially ulcerated, possibly from the loss of power in the fifth nerve, as happened in the experiments of Magendie. These symptoms did not come on at once, but one nerve after another became affected, during the course of many months.

The ulceration of the bones in such cases is generally unattended with suppuration, but sometimes matter is secreted between the dura mater and the bone, in the same manner as it is formed in the soft nodes situated externally. In this case, unless an opening has been made by ulceration through the whole skull, so as to allow a passage for the matter to be discharged externally, the further progress of the disorder is necessarily cut short by symptoms of pressure upon the brain. But fortunately this internal node, as it might be called, is a rare occurrence in this disease: though we shall afterwards see that matter is often formed in this situation, when the bone is primarily diseased.

In the third stage of the disorder, if it has been allowed to proceed so far, characterised by convulsions and by diminished mental powers, we evidently perceive the extension of the disease to the brain itself, which is not in an active state of inflammation, but is only irritated by the disease of the dura mater and the bone; so that if the brain is examined in persons who have died of this disease, the only morbid appearances are the effusion of serum beneath the arachnoid membrane and in the ventricles, with slightly increased vascularity of the substance of the brain.

Remarks.—This species of pains is then of a most formidable character, and, unlike the former species, appears to be produced immediately by the absorption of a morbid poison, and may therefore with more propriety be styled syphilitic: but is there any peculiarity in the syphilitic affection of the periosteum, to justify us in resorting to the use of mercury in every case? At a time when every disease which was capable of being cured by mercury was, for that reason, thought to be of venereal origin,—and when the reverse of this test was thought to be equally well founded, (a mode of argument which has given rise to the absurd name Pseudo-syphilis,)—it was not surprising that every affection of the periosteum, such as I have attempted to describe, was considered to be venereal.

But there can now be no doubt that many local affections are produced by blows upon the periosteum, which nothing but the history of the complaint will enable us to distinguish from venereal nodes. In one case, after such a swelling had existed for three years in an indolent state, the occurrence of secondary symptoms of lues occasioned a fresh activity in the tumor, which was cured by the same means as the other symptoms. In Mr. Brodie's collection is the skull of a man, who had received a blow upon the head, which produced such an appearance in both surfaces of the bones, as I have described to arise from disease of the pericranium and the dura mater; so that no difference can be detected when this skull is placed by the side of another which is known to be syphilitic.

These cases also occur spontaneously. For instance, a woman was admitted into St. George's Hospital, under the care of Mr. **Brodie**, having for four years suffered from pain in the head, followed by fits and by diminution of the mental powers. The pain was general, but in one part the surface of the occipital bone was exposed, carious, but not dead. She was almost completely deaf, and had paralysis of the portio dura on one side, with a curious corrugation of the tongue, apparently arising from loss of power in the muscles of one side. A portion of bone was removed by the trephine, to which the dura mater partly adhered, but a small spiculum of bone was found on its surface, with a drop or two of pus. Several other cases have also fallen under my notice.

The fact that other morbid poisons, besides that of lues, produce general pains in the periosteum, is also well known, and by none are they caused more frequently than by mercury, when injudiciously employed. Mr. **Travers**, in his Essay on Iritis, alludes to this action of mercury as a circumstance well known to the profession; and I am also satisfied of the fact from my own observation, as well as from the assertions of others.

The formation of nodes in syphilis is a subject on which great difference of opinion exists. It is asserted, on the one hand, that nodes of the periosteum, constitutionally produced, (for of their local origin from blows there can be no doubt,) do not arise from the influence of mercury alone; while other practitioners, of equal experience, express their belief that, even after syphilis, they do not occur, unless mercury has been exhibited, and attribute their formation to this medicine alone, or to the joint action of mercury and syphilis. For my own part, I have no doubt, from many cases which have fallen under my notice, and a consideration of the alteration of structure which the periosteum and the bone undergo, that disease of the periosteum may arise from many different causes besides local injuries; and, as the progress of the complaint appears to be the same in all instances, that any morbid poison capable of producing the first stage of the disease in the periosteum, may terminate in the formation of local tumors or nodes.

It is fortunate, however, as Mr. Travers has observed with regard to the disputed origin of iritis, that, in this disease also, our being unable clearly to trace the disease to its origin is not of essential importance in the regulation of our treatment. Whether the disease arises, in any particular instance, from the action of the syphilitic poison, or from mercury, or from the effects of both conjoined, or from whatever cause it derives its origin, still the course of the disease is so similar, that the same general plan is to be adopted. There can be no doubt that idiopathic affections of the periosteum may sometimes be cured by mercury, at other times without this medicine: such is also the case in syphilitic instances of the disorder; and, like iritis, nodes clearly traced to the action of mercury may often be cured by a more extended or more judicious use of the same medicine.

Treatment.—In the treatment of this disorder, the only constitutional means which can be safely relied on is a course either of mercury or of sarsaparilla, or of both medicines combined; and, in deciding our choice, several circumstances —such as the constitution of the patient, the history of the complaint, the nature of other venereal symptoms which accompany the pains, and the appearance of the tumors,—are to be taken into consideration.

The peculiarities of constitution which prohibit the use of mercury altogether, or indicate the necessity of extreme caution in its use, are well known: such as the existence of a strumous or phthisical diathesis; a highly nervous temperament, disposing to the production of erethismus; a peculiar idiosyncracy with regard to mercury; or that state of the system which is often called Cachexia syphiloidea.

Where no other symptoms are present, mercury is generally unnecessary, except when some large nodes, without suppuration, are present; and we may often be induced to give mercury on account of other syphilitic symptoms, in which case the pains will get well at the same time with these symptoms, though they might, if alone, have been cured by other means.

As a general rule, it may perhaps be said, in the first place, that the employment of mercury is *advantageous,* as the quickest method of curing the existing complaints, and the most effectual means of preventing a relapse, when nodes are formed early in the complaint, (early with reference either to the first reception of the virus, or to the duration of the pains in the periosteum;) and when the nodes are of large size, and composed evidently of periosteum or bone without any suppuration, and without much inflammation, and are situated on the cylindrical bones.

Secondly, that mercury is *unnecessary* when the pains continue for some time without giving rise to any local swelling; or when the nodes still retain a semi-cartilaginous appearance, and give a similar sensation to the finger to that which may be observed when they appear only at intervals.

And, in the third place, that the use of mercury is by all means *to be avoided,* whenever the disease has extended to the bones in such a manner as to produce soft nodes containing matter; in which case this medicine will seldom be borne with impunity by the constitution, and the disease will often be aggravated by it. Sometimes, indeed, the mercurial action will at first be attended with very beneficial results; but the system appears unable to support its influence for a length of time sufficient to produce a complete cure, and the case suddenly recedes into a state fully as bad, or even worse, than before the mercury was begun. Whenever we are induced by peculiar circumstances to employ mercury in such cases, it ought therefore to be combined with sarsaparilla, or other tonics. The use of mercury is also attended with more risk when the pericranium is the seat of the disease, than where the periosteum of other bones is affected.

On the whole, I am inclined to believe that, in by far the majority of cases of this disease of the periosteum, mercury is unnecessary; and that there is scarcely any symptom of the venereal disease, in the treatment of which we are more indebted to the researches of Mr. Rose and other surgeons, than the one under consideration. But, although I would confidently rely upon the efficacy of sarsaparilla in almost every case, still it must be confessed that in some instances the cure will not be permanent: even in these, however, this medicine is a valuable auxiliary to mercury.

Of local remedies little need be said, as their utility is evident in cases of nodes, for which leeches, blisters, mercurial plasters, and other applications, are of considerable service. A simple incision through a node of the periosteum is another method of treatment, which is well known to relieve almost instantaneously the most acute pain. It seems to be effectual principally by taking away the tension from the membrane, but probably assists the subsequent absorption of the tumor by the suppuration which is thus established. It is not advisable that any exfoliation of the bone should be produced, which is recommended by some authors. The same plan is also applicable to the severe pain arising from thickening of the pericranium without nodes, although in such cases, from the extensive nature of the disease, the pain is sometimes apt to return. More than once, however, I have known a patient beg that the operation might be repeated, in consequence of the complete relief from pain which had been given by a previous division. Where the dura mater and inner surface of the bones of the cranium are affected, some external appearances will occasionally point out the particular seat of the disease, so as to justify the removal of a portion of bone by the trephine; an operation which I have seen practised several times, with material alleviation of the symptoms.

The propriety of opening nodes in which matter has been formed, is a point which admits of discussion, but the chances of absorption are so considerable that it should not be done hastily: sometimes, however, a small puncture made with a lancet at a proper time will prevent sloughing of the integuments, and the bone, even when ulcerated so as to feel quite dead on the introduction of the probe, will recover itself after the evacuation of the matter.

4. *Of the disease of the bones.*—In the preceding description of the disease of the periosteum, it has been found to extend secondarily to the external surface of the bones; syphilitic ulcers from eruptions may also slough so deeply as to destroy a portion of the bones situated below. This often happens in the tibia; and ulcers in the throat and pharynx will often produce exfoliation of the soft bones at the base of the skull, and those of the nose and palate. In one case of this kind, which occurred at the Lock Hospital, an ulcer in the pharynx produced disease of the ligaments and of the bony structure of the upper vertebræ; and the person died suddenly from the dentata having, from this cause, been allowed to fall in so as to crush the spinal marrow.

But a similar loss of vitality in a bone may arise from an ulcer produced by mercury, or by any other cause; so that in such cases the bone cannot strictly be said to be affected by lues.

Again, the cancellous structure of the extremities of the long bones, or those of the wrist and fingers and the sternum, frequently become affected during the progress of syphilis: they inflame, suppurate, and exfoliate, sometimes in many different parts of the body at the same time, and often while the skin is covered by syphilitic eruptions. But these swellings, also, it would be wrong to call syphilitic, since they occur only in scrofulous persons, and run exactly the same course as when the bones are similarly affected without any venereal taint. It is only an instance of the excitement of a dormant disease, by the irritation of the syphilitic virus upon a strumous constitution; in the same manner as the absorbent glands, or tubercles in the lungs, often become actively diseased from the influence of the same poison, or from mercury or any other debilitating cause.

The bones of the nose become, perhaps, most frequently diseased in the manner just alluded to; but sometimes, probably, from the direct action of syphilis upon them, and from ozœna or ulceration beginning primarily in the Schneiderian membrane. But my present limits will not allow of a full discussion of this subject, and the progress of caries and necrosis of these bones after syphilis is not materially different from similar affections arising from other causes. From whatever cause, however, they have become diseased, the employment of mercury will almost invariably be found prejudicial.

But there is another disease of the bones, which seems to possess some peculiar characters, and which may perhaps with more propriety be denominated syphilitic, although in most cases the cause of the disorder is so complicated that it is difficult to ascertain how much is to be attributed to the specific action of lues upon the bones, and how much to the joint influence of this disease and of mercury. A great part of the violence of syphilis, as it formerly prevailed, particularly the extensive honeycomb caries of the cranium, and the loss of the bones of the nose, (which may be seen in anatomical museums,) was, without doubt, owing to the empirical and destructive employment of mercury; but yet it seems to me to be probable that the disease I have now to mention originates, in many instances at least, from the direct influence of syphilis upon the bones.

The parts most subject to it are the tibia and the bones of the cranium. There is, in these cases, for a long time a very acute pain in some particular part of the bone, not diffused like the pain in the early stages of disease of the periosteum, but fixed to some defined spot, which the patient says he can cover with his finger, or that it is not larger than a half-crown, or some similar expression. Like the other kinds of pain, it is variable, and increased by the warmth of the bed. After a time, a soft tumor arises over the painful spot, containing an ill-conditioned kind of pus; the skin becomes very thin and purple, and ulcerates, exposing carious bone at the bottom of the ulcer. So far there appears little difference between this kind of node and the soft node arising from disease of the periosteum, except the more fixed situation of the pain, and the absence of the hard ring of periosteum which generally surrounds an opening into a node of this membrane. But a more minute examination will generally show their different origin. If the bone at the bottom of a node of the periosteum is examined with the probe, it is hard, and feels like a bone accidentally deprived of its covering; and, if uneven on the surface from ulceration, the appearance of the part still seems to show what might be called an irregular healthy action, and exfoliation is confined to the outer layer of the bone, except in the cranium, where the inner surface of the bones is under the same circumstances as the outer layer only of other bones. But in this kind of abscess the bone is evidently itself diseased: it is generally softened and more vascular than usual, and a central hole may be detected, through which the probe may be passed into the cancellous structure, or between the tables of the skull. From this opening unhealthy granulations often arise, which are exquisitely tender. Sometimes a fungus grows in this manner, before an external opening is formed, and, being confined by the periosteum, the most excruciating pain is produced whenever pressure is made, or when warmth causes a temporary increase in the size of the fungus. The portion of bone which is thus affected very frequently dies and exfoliates, leaving a deep hollow, which is not again filled up by new bone. Sometimes, when the syphilitic action is arrested, the separation is so slowly effected that the old skin, or newly-formed cicatrix, becomes adherent to the surface of the dead portion of bone, leaving the central opening uncovered, so that the probe may still be passed into the black sequestrum which is thus exposed.

The nature of this affection when it attacks the cranium is essentially the same as elsewhere: it originates in the diploe, and small holes are formed by ulceration through the tables; sometimes several of them are formed near each other, and thus produce that worm-eaten appearance which is so remarkable in these cases. Frequently ulceration takes place through both tables of the skull, particularly around a dead portion of bone, and pus is seen oozing out of the holes upon each pulsation of the brain, and again receding till the next impulse is given by the arteries. The dura mater is not, in general, so extensively thickened as in the disease of the periosteum, so that, when the pus has a free exit through the skull during the process of separation, the granulations upon the dura mater are healthy, and the patients frequently recover. In one case several deep holes remained after the separation of pieces of the occipital and parietal bones, over which perfect cicatrices had been formed; and, when I first saw the patient, the skin was closing in over another opening of the same kind. Besides these openings, nearly the whole of the frontal bone formed a large exfoliation, through which the dura mater was exposed in two places, and separation appeared, from the movement of the pus just alluded to, to be going on around the whole extent. This person suffered very little inconvenience from the disease, notwithstanding an accidental fall when in this situation, which caused slight symptoms of concussion, and produced considerable hemorrhage from the dura mater.

The most frightful example of the disease which I have witnessed, occurred in a man who died during the time I resided as house-surgeon at the Lock Hospital. His skull has been presented to the College of Surgeons; and a preparation has also been made of the scalp, to show the great extent to which it had been destroyed by ulceration. The disease of the bones reached into the orbits, so as to produce complete and disgusting eversion of the eyelids, terminating in total blindness. In this man, as well as in the former case, the brain was little disturbed by the great extent of the disease, till the last two months of his life, when frequent convulsions took place, with gradual loss of the mental faculties.

A cessation of pain for a considerable time before the appearance of matter, is not unfrequent in these cases; so that the death of a portion of bone is for a long time unsuspected, till the formation of abscess over it again directs the attention of the patient to the disease.

The disease of the bones which I have thus attempted to describe, is more formidable than either of the preceding diseases; it indicates a very depraved state of constitution, and is generally accompanied with extensive sloughing ulcers of the pharynx, and with sloughing or phagedenic ulcers on the body, from eruptions of rupia or ulcerating tubercles. Mercury scarcely ever agrees with persons labouring under this disease of the bones, and yet, from the obstinacy or peculiar nature of the concomitant symptoms, we are often obliged to employ it: its effects must, however, be very carefully watched, and the quantity very gradually increased; and sarsaparilla and other tonics should always be exhibited at the same time. To these latter medicines, which may often be combined with advantage with large doses of ammonia, the cure should generally be trusted in the first instance. An increase or return of pain in the bone during a mercurial course is a very bad sign, and points out the necessity of immediately desisting from its use.

The appropriate local applications, and the surgical treatment of exfoliations, will easily suggest themselves during the progress of each case.

31, *Half Moon-street; January* 1827.

TRAUMATIC TETANUS.

Case of Acute Traumatic Tetanus; with some Observations, as given in a Clinical Lecture, by H. Earle, Esq. F.R.S. &c. (St. Bartholomew's Hospital.)

Stephen Thomas Mitchell, ætatis twenty, a glass-cutter, who had enjoyed good health all his life, was admitted into Pitcairn's Ward, on Monday, February 26th, at eight P.M. Six days before, while wrestling, he wounded the sole of his foot with a blunt rusty nail. He applied a linseed poultice to the part, and took some aperient medicine. On Sunday the 25th, after taking a hearty meal, he perceived a slight pain and stiffness in the back, and in a short time the muscles of the neck became rigid. When admitted into the hospital, the muscles of the jaw and abdomen were also affected. His bowels had not been opened for thirty-six hours; pulse eighty-two, full and hard. The wound in the foot had healed, and there was no surrounding inflammation or tenderness. The lower extremities were free from spasm. At half-past eight, Calomel gr. v. Jalap gr. xv. were with difficulty swallowed. At twelve, the same dose was repeated; and in about two hours after he took Infusi Sennæ Comp. ℥ij. During the night he passed five dark offensive evacuations, without experiencing any mitigation.

On the 27th, at nine A.M. he was decidedly worse; the jaw more closed, and the spasmodic affection constant, with more frequent exacerbations. He complained of great pain in the abdomen and at the back of his neck, and the muscles of the lower extremities were slightly affected. He was ordered Calomel gr. j. Jalapæ gr. v. every four hours. At half-past twelve, as no improvement had taken place, he was directed to take m. v. of Hydrocyanic Acid, and gradually to increase the dose until a decided effect was produced. At half-past two, twenty ounces of blood were taken from his arm, with temporary relief; his pulse varying from 120 to 150. At three o'clock, ten ounces more blood were taken, and he appeared easier for a short time. He had expressed a strong desire to be bled. At half-past three, the spasms were as violent as before: m. viij. of Hydrocyanic Acid were given, and ten more at four, without producing any sensible effect. At five P.M. the dose was increased to m. xx. and he became easier for an hour and a half: the spasms were less violent, and not so frequent; and he slept for a short time. At half-past six, he again complained much of his neck and abdomen; his pulse was softer, and about 130. He had continued to take the calomel and jalap, but had passed no evacuations since the morning. He attempted to take a dose of house physic, but could not swallow it. At seven, he took m. xx. more of the Hydrocyanic Acid, but without experiencing even temporary relief. At nine, the spasms were more violent, and his pulse was too rapid to be counted. He had perspired profusely the whole day; but, as no water had passed, a catheter was introduced, and about six ounces of high-coloured urine were drawn off. He gradually got worse, the muscles of the throat became violently affected, and he died in convulsions about midnight.

Post-mortem examination.—The pia mater was, perhaps, a little more vascular than natural; there were more red spots in the medullary substance of the brain than are met with in its healthy state; the spinal cord was healthy. There was extensive inflammation of the left pleura; the left lung was gorged with blood, and much inflamed. The sympathetic nerve, where it was in contact with the pleura, was very vascular. The right pleura, lung, and sympathetic nerve, were not so much inflamed as the left. There were several spots of effused blood between the pleura and diaphragm on the left side; also between the pleura and the aorta. The aorta was filled with fluid blood, its external coat was perfectly healthy. There was about an ounce of fluid in the pericardium. That part of the pericardium which is reflected over the right auricle was somewhat inflamed, and under it were several spots of effused blood; the right auricle and ventricle were filled with coagulated blood.

In the abdomen were observed recent adhesions between the stomach and liver. The peritoneal covering of both organs was much inflamed; as was the liver itself, and the gall-ducts in its substance were filled with bile. The spleen was tuberculated and inflamed. The mesenteric glands were numerous and enlarged. The mesentery was inflamed. The mesorectum had several spots of effused blood between its layers, and was inflamed. The alimentary canal was healthy; the stomach and small intestines contained mucus; the large intestines were filled with a very offensive dark-coloured feculent matter. All the nerves in the abdomen looked healthy.

At the bottom of the wound in the foot was a small piece of skin, about the eighth of an inch in diameter, which had been apparently pushed in by the nail. The internal plantar nerve, before it had divided into the two branches which supply the great toe and the toe next it, was completely torn through, and each extremity of the nerve was bulbous and vascular: every other part of the nerve appeared perfectly healthy. The theca binding down the tendons of the great toe was wounded.

This case affords another melancholy proof of the rapidly destructive effect of this uncontrollable disease. In the present instance it attacked suddenly, and speedily attained its most violent degree, affording no time for the administration of a milder plan of treatment capable of influencing the state of the secretions, which were obviously much deranged. It may be urged, that the removal of the injured part might in this instance have been beneficial, as the wounded nerve was bulbous and inflamed. To this it may be answered, that there was no symptom during life indicating any such affection, and the instances of ineffectual operations abound too much in the annals of military surgery to warrant a repetition. Even Baron LARREY, who advocates this practice, expressly confines it to mere chronic affections; in which cases sufficient time is generally allowed to employ other and less severe measures.

I was induced to employ the hydrocyanic acid from its powerful influence on the nervous system. The doses in which it was given, without producing any specific effect, prove how insensible the nervous system was to the operation of medicine. I was further induced to make trial of this remedy, from the numerous list of fatal cases which exist in the records of surgery, where opium and other more common medicines had been most extensively employed. As it was not given in sufficient doses sensibly to affect the nervous system, it can hardly be said to have failed, and, in the absence of better remedies, it may yet deserve a further trial.

In such acute affections, which in rapidity and severity very nearly resemble hydrophobia, it is justifiable to employ any new plan of treatment which affords the slightest ground for hope. I would venture to suggest in such cases the employment of Strychnine, in doses to affect the nervous system; and further, I should like some experiments to be tried on animals affected with tetanus, of the effect of carbonic acid gas, administered to an extent to produce temporary suspension of animation, which might be restored by artificial respiration.

I merely throw out these remarks as hints which may be worth entertaining, as the common beaten track has so often led to fatal terminations.

The dissection in this case was interesting, as it rarely happens that there are such unequivocal marks of inflammation. The blood which was taken coagulated firmly, but exhibited no appearance of inflammation. It has been stated by CULLEN, and even by recent authors, that the blood in tetanus will not coagulate, but appears broken down. I have met with cases in which the blood has exhibited the strongest marks of inflammation. In one case, which I published in the Medico-Chirurgical Transactions, where above one hundred ounces were taken, the blood was buffed and cupped to the last.

George-street, Hanover-square; March, 1827.

LUNAR CAUSTIC.

Directions for using the Lunar Caustic. By JOHN HIGGINBOTTOM, Esq. Member of the Royal College of Surgeons of London. (Communicated by Dr. MARSHALL HALL.)

I AM desirous of giving a distinct account of the plan which I have learnt from experience to be the best, in applying the lunar caustic in those diseases in which I have hitherto employed it; for the *proper mode* of application of the caustic is quite essential to secure its good effects, and to avoid some rather disagreeable consequences of a careless mode of using it.

In the first place, I always prefer to use the lunar caustic in its solid form; for it is in that state much more manageable than in any other. It is necessary to moisten the surface to which it is applied slightly with pure water, except in the case of ulcers, from which lymph or pus exudes, and then this is only necessary in regard to the surrounding skin.

In the second place, it is essential to know the precise effects of the lunar caustic, in the different degrees of its application. If the caustic be passed once slightly over the moistened skin of any part, except the hand (upon which the cuticle is thicker than elsewhere,) it induces an eschar simply; if it be passed over the surface twice or thrice, to the eschar will be added some vesication; if more frequently still, there will be vesication only. In the first case, there will be no pain; in the second and last, there will be soreness proportionate to the degree of vesication.

It is essential to the success of this plan of treatment by the lunar caustic, that these observations be kept constantly in view.

I shall now first describe the mode of application of the caustic in the treatment—

1. *Of recent bruised wounds of the shin, &c.*—In recent bruised wounds of the shin, the caustic should be applied upon the wound, taking care to leave no spot untouched, and upon the surrounding skin to the breadth of one-third of an inch, in such a manner as to induce an eschar without vesications. Any moisture which may remain upon the wound is then to be removed, by gently applying a little linen or lint, and the skin surrounding that to which the caustic was applied is to be moistened, and covered with goldbeater's skin, so that the whole may be protected from accident; the parts are then to be kept cool, free from covering, and exposed to the air.

This is usually all the treatment which is required in this kind of injury. I have generally found that an adherent eschar is formed, and that no further application or attention is required, except in old people, in whom the skin is sometimes irritable from various causes: in this case a little fluid will form upon the edges of the eschar, and will require to be evacuated by a small puncture, as in the treatment of ulcers about to be described; the goldbeater's skin being removed for this purpose, and then reapplied.

If the eschar be removed by accident at any time, the application of the caustic must be repeated as before. If due care be taken to avoid this kind of accident, I have not, in general, found it necessary to enjoin rest.

2. *Of small ulcers.*—I have stated, in my Essay on the Application of the Lunar Caustic, what were the cases in which I supposed it was proper to use this remedy. I have, since the date of that publication, improved much upon the mode of its application, and discovered many new instances of its utility.

The treatment of ulcers by the caustic, certainly requires more care and attention than some other cases; yet I have seldom found it necessary to attend daily to them for more than nine or ten days. It is of the greatest importance that the application of the caustic should be made with the utmost care; I shall, therefore, be very explicit in giving my directions for this purpose.

The surrounding skin is first to be moistened, and the caustic applied lightly, so as not to induce vesication, to the extent of half an inch round the ulcer. It is then to be applied over the ulcerated surface; and it may be applied more freely upon this surface than in the case of a recent wound. The whole is then to be protected by goldbeater's skin, in the manner already described.

The application of the caustic round the ulcer subdues the inflammation of this part, and induces a firmer, and more continuous, and adherent eschar. If any detached vesication be induced, it is to be simply exposed to the air; but if it communicate with the surface of the ulcer, the fluid is to be carefully evacuated. A light dress, as wide trowsers, if the seat of the ulcer be upon the leg, is to be worn.

On the succeeding day, the goldbeater's skin is to be removed, by being moistened with a little water: a small smooth incision is to be made, by means of a penknife, through the eschar in its central part, and then a little pressure is to be made, so as to evacuate any fluid which may have been effused; this fluid is to be carefully removed by a little soft linen; the breach in the eschar is to be repaired by reapplying the caustic; and the whole is to be protected, as before, by the goldbeater's skin.

On the first and second days, there is usually little fluid secreted; for five or six succeeding days, rather more is formed. The same means must be employed for evacuating the fluid every day, until the eschar finally becomes completely adherent. This will be ascertained by the appearance of indentations in the surface of the eschar, and usually occurs about the tenth day. It is remarkable that, in cases in which an eschar has been formed over a slough, it has required double the number of days to become adherent.

During the unadherent state of the eschar, it is proper to administer an efficient purgative medicine every second or third day, and to enjoin rest. Afterwards it is necessary carefully to remove the portions of the eschar as they separate at the edges, by means of a sharp pair of scissors, and to take great care to preserve it in its situation by the goldbeater's skin, and from being detached by accident.

3. *Of punctured wounds and bites.*—In *recent* punctured wounds, the orifice of the wound must be first examined: if there be any loose portion of skin closing the orifice of the wound, it is to be removed by a pair of sharp-pointed scissors or by a lancet; the puncture, and the surrounding skin, are then to be moistened with a little water; the caustic is to be applied to the former until some pain be experienced, and over the latter lightly, so as not to induce vesication. The caustic is then to be applied to the skin, for an inch round the puncture, and to a greater extent if the swelling exceeds this space. The part is then to be exposed to the air.

These cases are generally adherent from the first application of the caustic, but I have sometimes found the eschar to separate from the wound before it has healed, owing to its conical form: it is then only necessary to repeat the application of the caustic slightly, to complete the cure.

At a later period of punctured wounds, inflammation is usually present, the punctured orifice is nearly closed by the swelling, and a little pus has generally formed within. A slight pressure is to be applied to evacuate this fluid; the caustic is then to be applied within the puncture, and upon and a little beyond the surrounding inflamed skin, and the parts are to be exposed to dry. In this manner an adherent eschar is formed, and the inflammation subsides. If there be any vesication, it may be simply left to nature; the fluid is soon absorbed or evaporates.

If there be reason to suppose that an abscess has formed deeply, it must be opened freely by the lancet, and the caustic is then to be applied within the cavity; a poultice of bread and water, and cold water as a lotion, are then to be applied over the whole. The application of the caustic may be repeated every second or third day, if the swelling or inflammation require it; and the cold poultice may be renewed every eight hours.

I have several times applied the caustic over an inflamed surface, in cases in which I was not aware that suppuration had taken place. Even in these instances, an immediate check was given to the surrounding inflammation, and relief to the pain; but, two or three days afterwards, there was an increase of swelling, attended by some pain, which is not usual except when there is matter or some extraneous body underneath. In these cases I made a free incision with the lancet, and applied the caustic and cold poultice.

4. *Of external inflammation.*—I have had many opportunities of trying the efficacy of the lunar caustic in the treatment of external inflammation, and have published some examples of this mode of cure in this Journal for May and June, 1826.

In this case it is best, first to wash the part with soap and water, to remove any oily substance from the skin, and to wipe it dry; then to moisten the inflamed and surrounding skin, and to apply a long stick of caustic flat upon the moistened surfaces, taking care that not only every part of the inflamed skin be touched, but the surrounding healthy skin, to the extent of an inch or more. The caustic must be passed over the surface twice or thrice only. The part is then to be exposed to the air to dry, and to be kept cool.

In twenty-four hours, if the caustic has been properly applied, it will be observed that the inflammation has greatly subsided, and its progress been checked; but, if there be one spot left untouched, the patient complains of it. Every such spot must be touched with the caustic. At this period there is usually a little vesication, which, however, only does good, and never increases the inflammation or induces irritation.

On the third day, there is usually more vesication and less swelling, and the patient complains of a little pain, as of that of a blister; but, on pressure, the part has a puffy feeling, and is quite free from inflammation.

On the fourth day, the vesications are disappearing. It is best to leave them undisturbed, for the dried exudation defends the subjacent cutis.

On the fifth day, the vesicated crusts separate, leaving the subjacent parts free from soreness or inflammation. It is sometimes several days before the whole of these crusts peel off; but I believe it is best to leave them undisturbed.

In *erysipelas from wounds or ulcers*, the wound or ulcer, and the inflamed surface, are to be treated by combining these modes of using the caustic.

In *inflammation of the absorbents*, the caustic is to be applied as in external inflammation, passing it along the course of the inflamed absorbents, and beyond the inflamed surface in every direction.

5. *Of constitutional erysipelas.*—In this affection, bleeding, emetics, and purgative medicines are to be premised, and then the lunar caustic is to be applied in the following manner:—The caustic is to be applied over the whole inflamed surface, and beyond it upon the surrounding skin, to a far greater extent than in phlegmon,—perhaps to the extent of two inches or more round the inflamed border of the erysipelas. Any fresh accession of erysipelas must be immediately treated in the same manner. By means of the caustic, I believe it will often be found that we have a complete control over this disease. If the erysipelas be attended by vesication, the vesicles should be broken, and the part touched with the caustic; but, if vesications arise from the use of the caustic, they may be allowed to remain undisturbed. When the erysipelas has affected the head, the scalp should be shaved, that there may be no impediment to the due application of the remedy.

6. *Of phagedenic ulcers.*—In phagedenic ulcers, the caustic is to be lightly applied to the whole ulcer, but particularly to its edges and over the surrounding skin. If the ulcer be situated on the glans penis, a little lint is to be left upon it; if on any other part, the cold poultice and lotion are to be applied.

7. *Of the pain from applying the lunar caustic.*—I have never found the pain induced by the application of the caustic any barrier to its use. Patients generally suffer infinitely more from the inflammation, wound, or ulcer, treated in the ordinary way. The caustic gives a little pain at the time, but this is soon over. The ordinary mode of treatment is both more troublesome and painful, and for a much longer period. From the application of the caustic in some painful circumstances, the patient experiences early, if not immediate relief; and perhaps sleeps for the first time, after passing many restless nights.

I have never observed the least bad consequences from the proper use of the caustic, though this, like all other remedies of great efficacy, requires to be employed with a due attention to such rules as experience teaches us to be best adapted to secure the objects which we have in view.

Nottingham; March 1827.

WOUNDED ARTERIES.

Cases of Wounded and Diseased Arteries, treated principally at St. Thomas's Hospital, *by* B. Travers, Esq. F.R.S.

(Continued from page 236.)

Case IV. *Ligature of the Carotid for a Fungoid Tumor of the Cheek, attended by Arterial Hemorrhage.*

John Mansfill, admitted into St. Thomas's Hospital, December 8th, 1814, was the subject of a tumor, which, according to his statement, had appeared six weeks before his admission, after a violent fit of coughing. It was situated upon the top of the right cheek, extending from the infraorbital hole outward beyond the external canthus of the right eye, and downward below the inferior angle of the os malæ; it encroached on the orbit, and pressed slightly against the eyeball. He complained of a slight pain occasionally shooting from the tumor towards the ear; the swelling, and a sense of throbbing, were augmented on lying down in bed, and in coughing. He had a troublesome cough, attended with some morning expectoration.

26th February.—Mr. Henry Cline made an incision along the edge of the orbit, extending from the outer canthus to the infraorbital hole. He could discover no vessel supplying the tumor from within the orbit; and, after a dissection of some length, in which nearly the upper half of the tumor was removed, the probe passed, as was supposed, into the cavity of the antrum. The bleeding was profuse, but was checked by compresses. Three days afterwards, an erysipelatous swelling of the face ensued, attended with fever and delirium. To this succeeded considerable pulmonary congestion and dyspnœa, which was removed by bleeding and blisters. The portion of tumor removed was of firm consistence; that which remained gradually increased: the skin covering it was thin, and of a livid colour; the pulsation strong, and continued pressure very painful. The incision did not heal, but was filled by a fungous granulation. In this state he became my patient.

On the night of the 12th of April, an arterial bleeding took place from the fungus, to the amount of three pints. The hemorrhage was arrested by continued pressure upon the carotid on the same side, and compresses applied to the tumor.

On the 13th, at twelve o'clock, advised and assisted by Mr. H. Cline, I tied the common carotid. The operation, which was somewhat tedious, owing to the fulness and shortness of his neck, was satisfactorily completed; the artery alone included in a ligature of twine, and the wound dressed with adhesive plaster.

Ten P.M.—Pretty easy since the operation; pulse 108.

14th, nine A.M.—Pulse 104; passed a good night; complains of a little pain on the opposite side of the head. Takes five drops of laudanum in fever mixture every fourth hour. This was directed to quiet his cough.

15th, nine A.M.—Was relieved by an enema thrown up last night, and had slept well. At seven this morning, took a tablespoonful of castor-oil. Pulse 100; some pain in the neck. Bread poultice applied over the straps. Slight subsultus in the fingers; breathing slightly quickened, and some thirst. The opium was discontinued.

Seven P.M.—Much the same. Complains that the right side of his head feels dead. Oil repeated.

16th, ten A.M.—Slept pretty well. Has been much relieved by four copious motions. Pulse 105; subsultus almost gone; complains of drumming in the head. Wound dressed; healed above and below the ligature. Poultice continued over the straps. Tumor appears more flaccid.

Seven P.M.—Pulse 110; subsultus increased, but not considerably. Has complained this afternoon of pain in his chest, and in the shoulder adjoining the wound; also under the right ear, and at the back of the head. He has now a sense of drumming or thumping on the opposite side of the head. A poultice has been applied to the tumor since the operation.

17th, half-past one P.M.—Pulse ninety-three; little sleep last night. Has had relief three times from a dose of castor oil taken this morning. The spasms, pain, and uneasy sensations, which prevented his sleeping last night, have all left him.

18th, two P.M.—Pulse 110; considerable febrile irritation; restlessness. A very obscure pulsation is perceived by pressure of the finger upon the tumor. Takes sago boiled in milk, and seems to relish it.

19th, one P.M.—Had a bad night, being much disturbed by his cough, from which he has never been free since he entered the hospital, and has habitually taken the lohoch.* Expectorates much in the fore part of the day. Pulse ninety-five; makes no complaint of pain. Has been again relieved by the operation of castor-oil taken early this morning. A slight difficulty in swallowing, which he has had since the operation, is relieved.

20th, one P.M.—Slept better last night, in consequence of an opiate taken at bedtime. Pulse 100; has little or no pain. The poultice changed since yesterday for simple dressing.

21st, twelve M.—Pulse ninety-two; bowels open.

22d, half-past one P.M.—Pulse ninety-five; slept indifferently last night, and the night before; bowels open; wound healed, except the orifice for the ligature. Has had occasional pain at the back of his head since yesterday.

23d, ten A.M.—Cough disturbed him much last night. Pulse ninety; swallows well; has no pain, except in coughing.

24th.—Was attacked with rigors yesterday, at two P.M., which continued two hours. Ordered an ammonia draught, with twenty drops of tincture of opium. This was followed by a sound sleep and copious perspiration. At three this morning, had another attack of rigor, which continued for half an hour.

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* The name of a cough linctus.

Half-past four P.M.—Pulse eighty-one; perspires profusely.

25th, twelve M.—A slight return of rigor last night; took an opiate, and slept well. Pulse 142; pain at the right side and back of his head; subsultus tendinum. Ordered thirty drops of tincture of hyoscyamus in camphor julep every six hours.

26th, twelve M.—Pulse 120. Had a shivering fit an hour ago, which lasted half an hour. Still complains of pain in the back of the head. Castor-oil, taken early this morning, has had no effect. Ordered to be repeated.

27th.—Bowels freely relieved last night. Pulse 110, feeble. Slightly delirious, and has been light-headed at intervals during the last twenty-four hours. Slight oozing of blood from the wound in the neck during the night.

28th, twelve A.M.—Had four loose motions during the night. Pulse 132; delirious; much subsultus tendinum. The tumor is shrunk.

Ten P.M.—Pulse 146; comatose; breathing heavy and difficult. The ligature came away this morning.

29th, one P.M.—Dyspnœa increased; countenance pallid; pulse intermittent, and could not be counted. About two table-spoonfuls of blood issued from the wound at the moment of his death, which took place during the visit.

Dissection, 30th April.—*Thorax:* The lungs were much loaded, but not altered in structure.

Abdomen: The liver and pancreas had a morbid hardness. The right kidney presented a fungous tumor upon its superior surface, circumscribed, elevated from the cortical surface, resembling on section the tumor in the face, white and hard. There was an hydatid cyst attached to this kidney, and, upon cutting it open, the tubular substance was found to be affected with the fungus, and the ureter was enlarged. The opposite kidney was wasted, and the infundibula formed into pouches, containing some calcareous matter of a brown colour. The tubular structure was nearly obliterated. At the bottom of this kidney was also a large hydatid cyst.

Head: A considerable quantity of water was effused between the dura mater and tunica arachnoides. There was no other morbid appearance.

Upon examination of the tumor, it was found that it had no communication with the antrum or orbit, but occupied the whole space between them and the integument. The bone was absorbed at the root of the zygoma, but not considerably. Upon section of this tumor, and that formed in the kidney, they were found to correspond exactly in appearance. Each had an investing cyst, which was filled with a soft medullary substance, in which no intersecting membrane could be observed.

Carotid: The artery was divided, and the extremities separated by an interval of three lines. Some injection thrown into the opposite carotid had found its way into the upper portion, insinuating itself by the side of the clot, and filling up the space not occupied by it. The upper clot was unadhering to the internal coat, an inch and a half long, bounded by the superior thyroid artery, about half an inch short of the division. The tunics were completely severed by ulceration, but the internal tunic, separated from the middle and outer, projected above the mouth of the inferior portion of the artery, having a thin ragged appearance, about two lines in length. The inferior clot was an inch in length, not completely filling the tube, and adhering only at its superior extremity to the internal tunic, where it was closely embraced by it. The base of the clot was on the same plane with the round ulcerated edge of the external tunics, and above it the ragged portion of the cuticular coat projected as before described. There was no sign of a healthy adhesive process, nor any contraction of the ends of the vessel. The interior parietes of the wound had an ill-conditioned aspect, being destitute of lymph, though the wound in the integument was healed.

Remarks.—The appearances on dissection seem sufficiently to explain the state of constitutional irritation which proved fatal to this man; and to the process which would have been essential, had his life been prolonged, to secure him against a return of hemorrhage. Other cases have afforded evidence of the imperfect state of security in which the ligature of the carotid or subclavian has quitted the artery, by alarming returns of arterial hemorrhage, at intervals even of many weeks. An interesting example of this fact occurred lately in the practice of my colleague Mr. Green, the particulars of which will shortly be communicated to the public. The disposition to early healing of the skin-wound in these cases is apt to deceive us as to the state of the parts beneath. This should not be encouraged. A soft simple dressing of such wounds is preferable to uniting them by adhesive straps, which irritate, and, by agglutinating the edges, favour the confinement of matter.

The operations of tying the carotid and subclavian are not now so formidable as they were twelve years ago, when this case occurred; when the first had been practised with success in very few instances, and the second, although three or four times attempted, had not yet presented a successful result. The demonstrable progress of surgical science in this department within so limited a period of its history, is a truly gratifying reflection, and it would serve as an admirable incentive, as well as guide, to the zeal and industry of its votaries, if an impartial critical inquiry were occasionally carried into all its departments, which should place the neglected in contrast with the cultivated spots.

"Ita res accendent lumina rebus."

The carotid has been tied, not only for wounds and aneurisms, direct and anastômotic, nævi and bleeding fungi of the face, and active hemorrhage following the extraction of a tooth, but as an antecedent measure to the removal of a portion of the lower jaw, in the disease termed osteo-sarcoma; in one case at the interval of a day, and in another immediately preliminary to the operation. This was American surgery, which has presented us with other instances of an unexampled but successful boldness. In the cases in which the ultimate object of the ligature of the carotid has failed of accomplishment, it has seldom aggravated the condition of the patient; and in a large proportion it has effected all that was expected of it. But the fact recently published by Mr. WARDROP, if borne out by similar results, may be ranked as next in value to the original discovery of the practicability and safety of including the carotid in a ligature, and its efficacy for the cure of aneurism. And the proposition has the higher merit, as it is a new application of the same principle as that upon which we explain the cure of aneurism in ordinary cases, derived, as he informs us, from reflection upon that process.* At present, however, we are not authorised to expect that a ligature beyond the sac would be applicable in any case in which a permanent branch arose from the sac, except upon conjecture that such branch had become obliterated, which is far from improbable; or, secondly, in which the ligature must necessarily be contiguous to a considerable branch, as, for example, above the profunda femoris or epigastric artery.

These conditions seem almost to limit the application of this mode of operating to the common carotid. But it is probable that the utility of the ligature is not confined to the cases in which it positively intercepts all current: blood in motion will coagulate, though not so quickly as when at rest. Mr. Hewson, indeed, says, "I have found that it coagulates as soon when kept warm and when agitated, as it does when suffered to rest and to cool." It is fair to add, however, that he attributed its coagulation to rest "in those true aneurisms which are attended with a pouch." "For, in such enlargements, a part of the blood is without motion, which will congeal when at rest and in contact with the sac, and thus one layer may be formed, &c.; and thence, probably, is the origin of those laminated coagula met with in such sacs."†

Following out the principle above hinted at, future emergencies will develop what degree of restraint or remora of the current is sufficient to bring about the eventual obliteration of the sac. The subsequent morbid changes upon the integument of the sac,—the suppuration of the sac itself, and the expulsion of its contents, are unimportant consequences as regards the disease, and occasionally seen after the operation as hitherto practised for aneurisms of the lower limbs, in unfavourable states of health or constitution.

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* Medico-Chirurgical Transactions, vol. xiii. part i.

† Experimental Inquiry into the Properties of the Blood, p. 17, 26.

I annex an example from my own practice. If an aneurismal sac could be converted into an abscess, properly so called, there would be little danger of hemorrhage.

Case V. *Popliteal Aneurism, with Gangrene of the Integument, in which the Sac suppurated after the Operation, and superficial Gangrene occurred in several parts of the Leg.*

C. F. Hiellstrom, æt. thirty, a tall Swedish sailor, of a spare, irritable habit, was admitted, February 20th, 1823, with a very painful tumor filling the entire ham, and pulsating violently. First noticed it a fortnight ago, since which time it has increased so much as to prevent even a partial flexion of the knee.

Feb. 24th.—The tumor had increased, and near its centre appeared a discoloured spot, the size of a half-crown piece. The femoral artery was tied with a single ligature. The discoloration continued to extend; and, on the 28th February, a slough, as large as a sixpenny piece, separated, when about one ounce of grumous blood escaped. Further discharge was prevented by the application of a pledget of lint.

March 1st.—Sp. Tereb.; Ung. Simpl. āā p. æq. M. f. ung. vul. poplitis app.

3d.—No adhesion of the edges of the incision had taken place, and the wound had an unhealthy appearance.

Sumat Cerev. ℔ij. indies.—℞. Dec. Cinchonæ ℥jss.; Tr. Ejusd. Co. ʒj.; Pulv. Ejusd. ʒj. M. ter die sumend.—Poplit. adhib. Catap. Spum. Cerev.

On the 8th, a blush of erysipelatous inflammation appeared about the knee.

Catapl. cum Lot. alb.—Adde sing. haust. Tr. Opii ♏. v.—Sumat Vini rubri ℥iv. indies.

14th.—The ligature separated. From the aneurismal sac there is a copious discharge of purulent matter, mixed with grumous blood. Apparently from pressure by the posture in which the leg lies, a discoloured patch has formed on its outer side, which on the following day became gangrenous.

Applic^{r} Cataplasma Cerev.

The wound of the thigh discharged copiously for some time; but, by careful rolling, the sinuses were obliterated, when the man's health improved.

25th.—Sumat Vini rubri ℥viij. indies.

April 9th.—The wound from the operation had quite healed; the ulcers on the leg and in the ham were clean and granulating; the sac much diminished.

May 1st.—A gangrenous sore appeared on the outer edge of the foot.

Applic^{r} Lotio Acid. Nitr. dil. (gtt. vj. ad Aquæ ℥j).

25th.—The sore on the leg, which was nearly healed, again attacked by gangrene; that on the foot is deep and foul.

Cataplasma Cerev.

29th.—Three considerable gangrenous spots, which soon became sores, on the outer side of the foot, with much surrounding dusky redness.

Lint, dipped in the Nitric Acid Lotion, was applied beneath the yeast poultice.

June 20th.—The sores had all filled up with healthy granulations.—Empl. Sapon.

September 10th.—Discharged quite well.

Case VI. *Subclavian Aneurism, in which the Operation was followed by Inflammation of the Right Pleural Sac, which proved fatal.*

Wm. Cottrell, æt. seventy-three, a countryman, admitted Jan. 9th, 1823, with a very painful, strongly pulsating tumor, as large as a swan's egg, protruding the pectoral muscle, and extending to the clavicle. He first perceived a swelling on the right breast about three months ago, and it has since been gradually increasing. Having for some previous days taken aperient medicine, the subclavian artery was tied above the clavicle on Jan. 17th. The sac having given way in the act of passing the needle, much blood was lost, and, although the artery was perfectly secured, the ligature did not command the bleeding, and it was found necessary to introduce a sponge tent into the wound, by which the hemorrhage was controlled. In the evening, the cough, to which he had long been subject, became very troublesome.

Sumat Linctus Papav.

The following morning, Jan. 18th, he complained of uneasiness down the spine; pulse 100; little pain in the wound and arm; had slept two hours.—Sumat Mist. Effervesc.

Eleven P.M.—Pulse 125, and bounding; respiration oppressed; pain in the back increased.

V.S. ad ℥xvj.—Magnesiæ Sulph. ʒj. quartis horis sumend.

—The blood had a thick buffy coat.

Jan. 19th.—Pulse 117; breathing oppressed. For some hours has had frequent spasmodic action of the diaphragm.

The wound dressed simply.

Nine P.M.—The arm is warm, but benumbed; still complains of pain extending down the spine; breathing very troublesome; great anxiety; pulse 130. Has had two stools.

℞. Liq. Antim. Tart., Tinct. Hyoscyami, āā gtt. xxx. ex Aquæ Menth. ℥jss. M. quartis horis sumend.—Applic^{r} Vulner. Cataplasma Lini.

20th.—The wound dressed, and the sponge removed: the wound has a healthy appearance. In the course of the day, the breathing became stertorous, and painful on inspiration; the complaints of pain in the spine were more frequent; the anxiety of countenance was augmented; and the pulse sunk gradually, till at eleven P.M. he died.

Dissection.—On examination of the body, the structure of the lungs was found healthy, but the right sac of the pleura was much inflamed, and it contained about twenty ounces of serum, with floating flakes of coagulable lymph. The aneurismal sac was nearly empty. No adhesion had taken place in the wound, in which a small quantity of pus had been secreted. On minute examination, it was ascertained that the ligatures were firmly seated on the artery at the root of the sac, and adjoining the outer margin of the scalenus. The sac had a pouch-like enlargement upwards, which closely overlaid the artery on the pectoral side; and this having been penetrated in the passage of the needle, had occasioned the profuse arterial hemorrhage without saltus, which was not arrested by the tightening of the ligature. On this account a piece of sponge tent was placed within the lips of the wound.

Remarks.—Could the circumstance above mentioned have been foreseen, I need scarcely observe, the operation would have been regarded as impracticable. The hemorrhage was more terrific and uncontrollable than I ever witnessed. It commenced at the moment above stated, and was concluded to come from a rupture of the sac, being void of pulsation, and not commanded by drawing the ligature tight, and afterwards passing another above the first. The quantity of blood lost was so great, that it was at one time extremely doubtful whether the man would quit the theatre alive. His age, added to this circumstance, was thought to render the repetition of venesection, beyond a single bleeding, inadmissible. This was, perhaps, an error in judgment.—Some gentlemen attributed the inflammation of the pleura to the long exposure of the chest in the reduced state of the circulation; but the unavoidable introduction of a foreign substance into the wound, and the forcible separation and subsequent inflammation of parts thereby occasioned, is a more probable explanation. The thoracic cavity was uninjured in its integrity. I have seen two instances of the sympathetic inflammation of the contiguous pleura, from the amputation of schirrous tumors of the breast, which proved fatal at little more than the same interval of time; and a third from the inflammation, after incision, of the sac of a large chronic abscess, situated beneath the scapular and pectoral muscles.

The pain referred to the cervical spine, and frequent spasmodic affection of the diaphragm, were evidences of the acute irritation of the cervical and phrenic nerves.

(To be continued.)

INJURIES OF THE HEAD.

Cases of Injuries of the Head, treated by Mr. JOBERNS, Mr. C. BELL, *and* Mr. SHAW, *at the* MIDDLESEX HOSPITAL.

(Continued from page 246.)

Contusions of the Skull.

CONTUSION of the skull, the effects of which have been so admirably described by POTT, is generally the consequence of a smart blow received on the head from some blunt instrument,—as the flat end of a hammer or a cudgel. Such a blow is very apt to separate the dura mater from the internal surface of the bone; to destroy the connexion of the pericranium with the skull; or so to injure the vessels of the bone as to render them unfit for its further support and nourishment. The bone dies, becomes a source of irritation to the brain, and inflammation with its consequences supervene.

CASE X. *Contusion of the Skull, followed by Inflammation and Abscess in the Brain.* Treated by Mr. SHAW.

Patrick Doyle, æt. twenty-seven, a strong Irish labourer, was brought to the hospital, about half-past six o'clock, on the evening of the 25th of October, 1825. He was perfectly insensible; his breathing was stertorous, and the pupils of the eyes were dilated; the pulse was rather full;—in short, his symptoms were exactly those of a man in a deep apoplexy.

It appeared that, about fifteen or sixteen days before, this man had been drinking with some women of the town, in a public-house in St. Giles's. His wife, having received intelligence of this, entered the room unobserved, and suddenly assailed him with a half-gallon tin can, with which she struck him several times on the head. A blow on the forehead felled him to the ground, where he lay weltering in blood. After this affray he was conveyed home, and in the space of four days he found himself so far recovered as to be able to resume his usual occupations. In a few days, however, he was obliged to betake himself again to his bed, so much did he suffer from violent pain in the head. He lay in this condition for more than a week, and his constant request was "that some one would bind up his head tight." At the end of this period, we are told that he "became heavy for sleep;" that he gradually lost all consciousness, and at length fell into a complete state of insensibility. In this condition he was taken to St. Giles's workhouse, where he remained for two days; and from thence he was conveyed to the hospital. It was afterwards elicited at the inquest that this man had also been struck several blows on the head with a hammer.

The above history was extracted from the friends with the utmost difficulty: they appeared unwilling to give any information; so that the accounts which were at first received were so discordant and unsatisfactory, that the surgeon was obliged to depend entirely upon the symptoms in forming his diagnosis.

The head was examined, and numerous cicatrices were found on the scalp. There was a wound on the forehead, about two inches above the right orbit: here a probe was introduced, and the bone was found to be bare, its surface rough and irregular, insomuch that the sensation communicated to the hand gave rise to the idea that the bone was fractured. Mr. Shaw enlarged the wound of the scalp, and thus disclosed a circular portion of bone, a quarter of an inch in diameter; it was denuded of its periosteum, of a greyish-white colour, and apparently dead. This small piece of bone appeared to be indented; but this deceptive appearance was caused by a thickening of the pericranium around the dead bone. The process of exfoliation had begun.

This was certainly a hopeless case. The symptoms were evidently those which accompany an oppressed state of brain; and their progress and duration clearly pointed out that such oppression must arise from a collection of pus or serum within the cranial cavity, interrupting the due circulation of blood through the brain. The only chance, therefore, of affording relief was in the removal of the dead portion of bone, in the hope that the cause of oppression might be found between the skull and dura mater.

The wound of the scalp was enlarged, and the trephine was set on in such a manner as to include the dead bone. The patient, during the operation, gave no signs of sensibility. The dura mater was observed to be a little discoloured; it was thinly covered with a sero-purulent fluid. The portion of bone removed was dead throughout; its internal surface was rough, and of a darker colour than the surrounding bone. The dura mater was covered, as usual, with circular pieces of oiled lint; the integuments were laid down, and gentle support was afforded by the application of a roller. The operation was, as had been feared, quite ineffectual, and the man died in about three hours.

Dissection.—The skull was cut in the usual manner for examining the head; but the surgeon, expecting to find an abscess in the cerebrum, carried his knife horizontally through the dura mater and hemispheres of the brain, on the same level with the division of the skull. Thus the hemispheres of the cerebrum were removed with the skullcap. A large quantity of serous fluid was found in the ventricles. There was an abscess in the right hemisphere of the cerebrum, at the part situated immediately beneath the dead portion of bone. Here also the surface of the brain was discoloured, and adherent to the internal surface of the dura mater. The parts of the brain surrounding the abscess were much softened, and in this softened texture spots of extravasated blood were very numerous. No other morbid appearances presented themselves.

CASE XI. *Contusion of the Cranium, in which the Bone exfoliated.* Treated by Mr. JOBERNS.

Mary Braggen, æt. seven, admitted September 18th, 1826. This child had fallen from a window on the first floor: when picked up, she was perfectly sensible, and was brought immediately to the hospital. There was no aberration of intellect or want of consciousness, to mark the presence of concussion; but the influence of its more partial effects might be observed in the pallid countenance, the small and weak pulse, and the disturbed condition of the stomach, indicated by frequent vomiting. There was a wound of the scalp, three inches in length: it commenced near the root of the nose, took a direction upwards, traversed the upper part of the forehead, and then descended towards the left temple; so that a semicircular flap of the integument, covering the left side of the forehead, was detached from the bone. The wound was of a contused character, and the cellular membrane was filled with mud. The skull was to some extent deprived of its periosteum, and a portion of the cranium, nearly two inches in circumference, was beaten in from its centre. There was no abrupt or broken edge of bone; it formed a regularly concave depression.

When the bleeding had ceased, the edges of the wound were brought together by adhesive straps, and the part was kept cool by an evaporating lotion. She was well purged, and an antimonial mixture was afterwards prescribed. In the evening, the pulse was full and quick, and the skin was hot. Leeches were applied to the head.

For the first three days, symptoms of inordinate vascular action of the brain were present, which were met by appropriate antiphlogistic measures. The contused nature of the wound prevented union by the first intention; the wound became sloughy, and discharged a dark coloured and thin sanies. Long adhesive straps were applied, in order to prevent that retraction of the integuments which is so apt to occur in wounds of the scalp; and the wound was covered with a poultice of bread and water.

October 1st.—The wound has healed, except at the part situated over the contused bone: this also contracts, so that we have reason to hope that the bone may not be very extensively destroyed.

Portions of bone afterwards came away by a tedious process of exfoliation.

Fractures of the Skull.

Before relating any cases of fracture of the skull, we cannot do better than repeat the sentiments contained in the first sentence of this series of cases. Thus, in the language of Mr. JOHN BELL, we would say, "that, to think that a fractured skull is a chief cause, or even an absolute sign of danger, is a very poor and vulgar notion: it is not the damage done to the skull, but the injury to the brain, that is the cause of danger, and the fracture of the skull is but a faint and uncertain mark of the harm done to the brain."

Case XII. *Compound Fracture of the Skull, with Rupture of the Dura Mater, followed by Fungus Cerebri.* Treated by Mr. Joberns.

Charles Shuggate, æt. thirteen, was brought to the hospital June 26th, 1826, at nine P.M. He had received a kick on the temple from a horse; he remained insensible for a few minutes. There was a wound about three inches in length, which commenced a little anterior to the right emminentia frontalis, and, proceeding backwards, terminated at the superior margin of the temporal muscle. The finger was introduced, and the skull was found to be fractured. The fracture ran in the same direction as the wound, crossed the coronal suture, and thus included both the frontal and right parietal bones. The portion of bone above the line of the fracture was depressed about a quarter of an inch below the level of the surrounding bone. The depressed piece of bone was nearly three inches in length. The dura mater was ruptured, as shown by the discharge of brain and blood by the wound. Some attempts were made to elevate the depressed bone; but, as this was found to be impracticable without removing a part of the skull, and as the boy was quite sensible, roaring loudly, with a pulse at ninety, and beating quickly, the opening was not enlarged; the bone, although detached from the skull, was left lying on the dura mater; it being considered less likely to cause a dangerous inflammation than the high excitement which would necessarily be the consequence of an operation under the existing circumstances.

The wound was left open, to allow of a free escape of blood, &c. The head was shaved, and covered with an evaporating lotion; and some aperient medicine was administered.

27th.—He was extremely quiet this morning. He did not complain of any pain in the head, except in the situation of the wound. Pulse ninety-five; tongue clean and moist; skin cool.

The bowels not having been acted upon, he was ordered a purgative enema; and the following draught was directed to be taken every six hours—Magnesiæ Sulph. ʒj.; Vin. Antim. Tart. m. xx.; Aquæ distillat. ℥j.

28th.—He complained of slight headache. The countenance was dull, and there was a dropping of the upper eyelids; the tongue was rather dry, and was traversed by a brownish central line; skin hot; pulse eighty-eight.

Nine ounces of blood were taken from the arm, when the pulse began to faulter.—To continue taking the Antimonial Mixture, with a smaller quantity of Sulphate of Magnesia.

29th.—The abstraction of blood appears to have been attended with the happiest effects. He is free from pain in the head; but he complains of a throbbing sensation in the situation of the wound. The skin is cool and perspiring; tongue moist and less furred; pulse sixty-eight, and soft. The wound has been poulticed for the last two days; it still continues to discharge brain and matter.

July 2d.—No change till to-day. Again he began to complain of pain in his head. Pulse seventy-six, strong, and cord-like.

He was bled to ten ounces.—Calomel gr. iv.; Opii gr. ss. to be taken at bedtime.

3d.—He expressed himself much relieved by the bleeding. Pulse seventy-two, much softer; tongue moist, and covered with a thin and yellow fur. A small, pulsating, and brain-like protuberance was observed in the wound: this substance was similar to an incipient fungus cerebri.

6th.—There had been a diminution in the severity of all the symptoms since the last report; but, on visiting him this morning, we found his skin hot, his tongue dry, and the pulse quick and corded. The pupils were dilated, and he slumbers much. The protrusion from the brain has now assumed all the characters of Fungus Cerebri. It was a pulsating tumor, as large as a pigeon's egg, of a greyish colour; its surface granulated, and here and there covered with small spots of coagulated blood.

A piece of simple dressing was placed on the tumor, and slight pressure maintained by adhesive straps.

8th.—He is inattentive to questions, and his answers are incoherent. His eyelids are constantly closed; the pupils are dilated; and the pulse is slow and intermitting. A probe was introduced by the side of the tumor, but there was no confined matter.

10th.—Restless and noisy, and tore the dressings from the wounds. Ten leeches were applied to the temples.

12th.—During the whole of yesterday he was much quieter, and appeared to be relieved; but to-day the report is not so favourable. He had passed his feces and urine in bed; pulse fifty-five, and intermittent.

Hydr. Submur. gr. ss.; Pulv. Antim. gr. j. to be taken three times a-day.

There has been no increase of the fungus since the application of the adhesive straps.

14th.—The fungus has began to slough, and there is no disposition to a fresh protrusion. He appears to be less comatose. Pulse still slow, and somewhat hard.

17th.—He no longer passes his feces and urine in bed. He says that the throbbing sensation which he has felt from the first in the situation of the fungus is much less. He raises the eyelids with more facility. The wound continues to discharge a large quantity of pus.

20th.—His improvement is now rapid: he is much more sensible; there is no appearance of fungus remaining; the wound is granulating kindly, but the discharge is still profuse. Pulse sixty; tongue clean and moist.

He had a slight attack of fever on the 23d, after which period the progress of amendment was uninterrupted. He was detained in the hospital for several months, on account of an exfoliation of the bone. He left the hospital with the bone as much depressed as at first.

This wound of the brain was in the situation of the organ of *gaiety*, but, from what we can learn from the friends, he exhibits no deficiency in this respect, being as merry as before.

CASE XIII. *Extensive Compound Fracture of the Skull.*
Treated by MR. BELL.

James Barnes, æt. five, admitted into the hospital September 20th, 1826. He had fallen head-foremost into a cellar: he was senseless for about a quarter of an hour. There was a small wound of the scalp covering the anterior and lower parts of the right parietal bone, so small as not to admit of the introduction of the little finger. With the assistance of the probe, the skull was discovered to be fractured. The fracture extended backwards in a semicircular form, taking much the same course as the squamous suture; and, inasmuch as it was an inch above this suture, so was it of much greater extent. The upper portion of the bone was depressed about a quarter of an inch below the lower or temporal part of the skull. Here, then, was a great part of one side of the skull beaten in and depressed. The child was, at the time it was brought to the hospital, suffering from most of the important effects of concussion. The skin was cold, the pulse small, and he vomited frequently when the bleeding had ceased. The usual means were adopted of uniting the wound, and cold was applied to the head. —In the evening, reaction had taken place; the pulse was full and strong, the skin hot and dry. Ten leeches were applied to the head, and he was ordered to take a brisk purgative.

21st.—There was great tenderness and tumefaction of the scalp on the injured side. The heat of skin, and other febrile symptoms, were much diminished; but the marks of a violent commotion of the brain were still present,—the pale and anxious countenance remained unchanged, and the vomiting continued.

23d.—To-day the scalp was hot; the tongue slightly furred, and the pulse hard and strong. He appeared to be averse to light. In consequence of the vomiting continuing unchecked, twelve leeches were applied to the head; and, to allay this irritability of the stomach, which was originally only symptomatic, the following draught was ordered to be taken every six hours—

H. Salin. ℥j.; Vin. Antim. Tart. m. xv.; Træ. Opii m. iij.

26th.—The vomiting did not recur after the second dose of the medicine had been given; so that, on the following day, the tincture of opium was omitted, and the antimonial mixture only was continued.

No unfavourable symptoms occurred after this. The wound suppurated in the whole length of the fracture, and it was found necessary to make a counter opening behind the ear. The matter, when collected under the scalp, receives a distinct impulse as often as the child cries or coughs: on the other hand, when the child sobs, or otherwise draws the air into the lungs, the abscess is, as it were, emptied of its fluid contents, and the tumor of the scalp subsides. This pulsatory motion, which is communicated to the matter of the abscess, must be evidently produced by the matter lodging upon the dura mater.

October 14th.—The cavity of the abscess has diminished in size, much of the surrounding scalp having adhered and become attached to the bone. The health is good: in short, things wear a most favourable aspect. He was discharged.

A small scale of bone was afterwards thrown off.

CASE XIV. *Compound Fracture of the Skull.*

Treated by Mr. SHAW.

Caroline Free, æt. four, was admitted on the 12th June, 1826. She had fallen on her head from a height of thirteen feet. When picked up, she was senseless, and remained so for some minutes. There was a wound of the scalp, of an inch and a half in length, over the coronal suture on the left side, and just above the temporal muscle. The finger was introduced, the skull was felt to be fractured and depressed. The portion depressed might be somewhat more than an inch in length, and was about a quarter of an inch below the level of the surrounding bone. There was not one unfavourable symptom present, further than that the pulse was rather weak, and the child's countenance somewhat paler than usual. Having ascertained that the depressed piece of bone was not sharp or angular, the wound was united by adhesive straps.

The favourable progress of this case was uninterrupted. No symptoms of oppression occurred; and the slight disposition to inflammation which followed was easily controlled by the exhibition of calomel, antimony, and purgatives. She was discharged before the end of June.

The preceding cases may be regarded as good examples of the little interference required on the part of the surgeon in elevating depressions of the skull in children. "Perhaps there is no rule in surgery more correct in theory, nor better supported by authority, than that which warns the surgeon to beware of being too busy in raising the depressions of the skulls of boys." "Where depressed bone has in general no sharp edges,—where the skull rather bends than breaks,—where the bone is vascular and growing, and the circulation in it and in the integuments sound and vigorous, the chance of fracture healing is so great that I should not presume to touch it, unless in most particular circumstances." Yet has it been laid down by some, that every compound fracture of the skull with depression should be trephined, whether symptoms of compression be present or not. But, when no symptoms are present, we would rather say, that, "whenever a piece of bone is so isolated or separated from its connexions that it must die, it should be taken away; for it produces exactly the same effect on the dura mater, and ultimately upon the pia mater, as if a foreign body lay there. When, from the form of the fractured bone, (judging from what is external,) you conclude that a sharp angle or edge presses in upon the membranes, the depressed portion should be raised, if not entirely removed."

POISONOUS MATTER IN OFFAL.

Cases illustrating the History of a peculiar Local Disease, apparently produced by the Application of a Poisonous Matter contained in Offal. By B. C. Brodie, F.R.S. &c.

16, *Saville-row; March* 18, 1827.

Dear Sir,—I send you an account of some of the cases which I lately mentioned to you, in which a remarkable train of local symptoms followed the handling offal. In the first of these cases, the disease was allowed to take its own course, and it subsided spontaneously in about six weeks. In the two other cases, medical treatment was employed with apparent advantage. You may recollect that I remarked in conversation, that, as such cases are not very uncommon, I had no doubt that the disease had been observed by others, although, as far as I knew, it was not described by authors. In confirmation of this opinion, I have since been informed by my friend Mr. Travers, that he has seen several persons affected in a similar manner, and from the same cause, whose symptoms appeared to be relieved by the exhibition of the Pilula Hydrargyri.

I am, dear Sir, your obedient servant,
Dr. Macleod. B. C. BRODIE.

Case I.—A. B., a healthy young man, on the 8th of September, 1820, while engaged in feeding dogs with sheep's offal, cut the forefinger of his left hand near the tip. The wound was slight, and healed in the course of two or three days; but, as soon as the healing was completed, the end of the finger was observed to be inflamed and swollen as far as the second joint: from thence the inflammation slowly extended over the first phalanx of the forefinger; next up the outside of the hand, as high as the wrist; then downward over the middle finger; again upwards on the palm of the hand to the wrist; and again downward over the whole of the ring finger, and the first phalanx of the little finger. The inflammation was marked by a deep redness of the skin, with slight tumefaction and much tenderness. The tumefaction and tenderness were greatest in the situation of the joints of the fingers, so as to occasion much difficulty of moving them. The margin of the inflammation was less defined than that of erysipelas, but more so than that of common phlegmonous inflammation. It was observed that the redness occupied only a small portion of the hand

and fingers at one time, leaving the part previously affected as it spread to a new surface; but that the swelling and tenderness remained a considerable time after the redness had disappeared, especially in the neighbourhood of the joints. The general health was unaffected, and there was no enlargement of the lymphatic glands in the axilla, or above the inner condyle of the arm.

On the 14th of October, there were only some slight remains of the disease in the little finger; and in the course of a short time afterwards the symptoms had entirely vanished.

Case II.—J. W., the cook at an hotel, on the 10th of October, 1821, scratched his finger with the extremity of a rib, while taking out the viscera of a hare. The scratch was on the inside of the second phalanx of the forefinger. In the course of two or three days, he observed an appearance of inflammation in the situation of the hurt, marked by a slight degree of redness and swelling, and by tenderness. The inflammation extended up the forefinger to the back of the hand, and from thence it passed downwards over the middle finger, subsiding in one part as it attacked another.

On the 31st of October, when I first saw the patient, there was inflammation of the skin covering the first phalanx of the middle finger, and also of that on the back of the hand, nearly as high as the wrist. The inflamed parts were of a crimson red colour, and sufficiently painful and tender to prevent the hand being used. The general health was not affected. Leeches had been applied several times before I was consulted, without benefit. I prescribed some local applications, which, however, did not seem to have any influence over the disease.

On the 8th of November, therefore, I recommended that one-eighth of a grain of the oxymuriate of mercury should be taken twice daily, in the form of a pill.

On the 27th of November, the redness and swelling were much abated, but there was considerable pain in the hand, extending up the forefinger. In addition to the oxymuriate of mercury, ʒj. of the powder of sarsaparilla was directed to be taken three times daily.

December 4th.—The redness and swelling had nearly disappeared; but the patient complained of what he called a *numbed* pain, extending up the forearm and arm as high as the shoulder.

23d.—The pain in the arm and forearm not being relieved, a blister was applied to the arm. No alteration was made in the other part of the treatment.

31st.—The pain in the arm was much relieved, but that in the forearm continued unabated. A blister was applied to the anterior part of the forearm. The internal remedies were discontinued.

January 12th, 1822.—The pains in the limb were much diminished. It was directed that the arm and forearm should be rubbed with a stimulating liniment two or three times daily.

26th.—There were no remains of the disease.

Case III.—A middle-aged woman, on the 14th of October, 1826, pricked the middle finger of the left hand with a splinter of bone, in cleaning the inside of a hare, of which the viscera had been previously removed. The prick was at the posterior part, near the nail. On that day she suffered no inconvenience, but on the following day, October 15th, there was a slight inflammation near the puncture. During the following week the inflammation increased, and it was attended with a good deal of pain, so as to prevent sleep at night.

On Monday the 23d of October, when I first saw the patient, the whole of the middle finger was inflamed and swollen, but the inflammation was greatest in the second and third phalanx; and here the skin was red, tense, and shining. She complained of a tingling and throbbing pain, which prevented sleep; but there was little or no disturbance of the general system, beyond what sleepless nights might have occasioned. I prescribed one-eighth of a grain of the oxymuriate of mercury to be taken twice daily, and the application of a poultice.

On the 24th of October, the inflammation at the end of the finger had abated, but it had extended to the back of the hand.

25th.—The inflammation had nearly subsided in the middle finger, but it had crossed over the back of the hand to the ring finger; and on the following day, October 26th, it had extended to the forefinger also.

On the 28th of October, the middle finger was still somewhat swollen, but it exhibited no other marks of inflammation. There was, however, considerable inflammation, marked by pain, tenderness, and redness of the skin on the back of the hand, and extending from thence to the back part of the forefinger and ring finger. She described the pain as attended with a sense of tingling and throbbing, less severe than that which she endured formerly, and not sufficient to interrupt her sleep. She was directed to continue the use of the oxymuriate.

November 2d.—The inflammation had extended no further, and was much abated in the parts formerly affected; and from this time she continued rapidly to mend.

15th.—No marks of the disease were left, and she was directed to discontinue taking the medicine.

CRITICAL ANALYSES.

Quæ laudanda forent, et quæ culpanda, vicissim
Illa, prius, cretâ; mox hæc, carbone, *notamus*.—Persius.

Outlines of Human Physiology. By Herbert Mayo, Surgeon, and Lecturer on Anatomy.—8vo. pp. 406, London, 1827.

During the rapid progress which the science of physiology has recently made, this country has not, perhaps, been behind her continental neighbours in the share she has contributed to its advancement; but it is somewhat remarkable that, till lately, not one original treatise upon this subject should have been written by an Englishman, and that the only works in the hands of our students have been translations of different foreign writers, particularly of Blumenbach and Richerand, whose works have been published by various successive editors: in several instances, indeed, with the addition of some very valuable and interesting notes and comments upon the text of the original authors. But there have been so many successful labourers in the pursuit of physiological knowledge, that the whole science, within the last few years, has assumed a new aspect: the most cautious deductions from experimental research are alone sufficient to satisfy the philosophic scepticism of modern science; and experiment has elicited so many important facts, that, in the translations alluded to, notes are required to explain even the comments themselves. Such a mode of publication, it must be obvious, will therefore be little adapted to the necessities of one desirous of acquiring any branch of science; some previous knowledge being necessary to enable the reader to compare the text and the notes together, and decide to which authority he is to give credence.

With this impression upon our minds, it was not without satisfaction that we anticipated an original English work from the pen of so distinguished a physiologist as Mr. Mayo had proved himself to be by his former publications. Nor have our expectations been disappointed; and we can now congratulate the medical profession on possessing a work which is well calculated to facilitate their studies.

It is indeed not very long since we had occasion to notice the publication of a work on Physiology by Dr. Bostock, which might appear to some of our readers to supersede the necessity for another publication on the same subject. But excellent as the two volumes which Dr. Bostock has yet published must be acknowledged to be, they will suit a part only, and that a small part, of those for whom a work on physiology was required. The labour and research which have been bestowed upon the compilation of his work, and the clearness and ability with which his extensive learning is brought forward, are calculated to reflect most deservedly the greatest credit upon his name as an author; and, to a reader who is already a physiologist, his volumes are themselves a library. There is not an author of the least celebrity whose opinions are not canvassed with the utmost ingenuity and candour; but, after reading the voluminous compilation, the student rises from the perusal of the numerous theories and experiments adduced upon any particular subject, at a loss to know by whose opinion he is to be guided; unable to ascertain which author Dr. Bostock is himself inclined to follow; and regretting, perhaps, that the learned compiler is not himself a practical physiologist.

The work which we now bring under the notice of our readers is free from the disadvantages to which we have just alluded. Its brevity does not allow of the discussion of the numberless hypotheses to which the science of physiology has given rise, but almost every part of it bears testimony to the labour which the author has himself bestowed on the various interesting inquiries he has undertaken to teach; and the clearness and total absence of unimportant matter which results from this practical knowledge of the subject, are such as to render the study easy and delightful to those who were previously completely ignorant of physiology. It is therefore adapted to every class of readers, and we venture to predict that in a short time it will become the text-book of the medical student, and will be studied by great numbers beyond the circle of the profession.

It is extremely difficult, in a review of a systematic work on any science, to make our readers acquainted with the real powers of the writer, or to give a complete knowledge of the subject. The brevity and conciseness, which are chief requisites in such a work, prevent any further abridgment. We shall only attempt, therefore, to lay before our readers an outline of the plan which the author has adopted, and to extract a few passages which may serve to convey an idea of the style and manner in which the work is conducted.

Mr. Mayo commences his System of Physiology by a few remarks on the tendency of physiological studies. He points out, in an eloquent passage, the first impression which the study of the functions of living beings is perhaps invariably calculated to produce,—viz. to raise the mind of the student from "nature up to nature's God;" and afterwards successfully combats the stigma so often thrown upon medical studies, that they lead to irreligion or materialism. The arguments commonly brought forward in support of the doctrine of materialism, are deduced from the intimate connexion which exists between the mind and the body, and from the analogy between the relation of thought to the brain, and that of other functions to other organs. It is unnecessary to illustrate the futility of the first argument we have adverted to; and, in regard to the second, Mr. Mayo has very clearly exposed a fallacy so frequently lost sight of, that we cannot forbear extracting his remarks.

> "Physiologists have ascertained that different parts of the body have different offices; that the formation of bile takes place in the liver, of saliva in other glands; that a power of shortening belongs to certain fibrous parts; that consciousness is connected with the nervous system. Now, as the liver is admitted to be necessary for the separation of bile from the blood,—as the power of shortening is the result of the structure of a muscle, it has been supposed to be an analogical inference, that thought is the produce of the brain.
>
> "But the separation of one fluid from another, and the shortening of a fibre, are expressions which convey no meaning if we attempt to abstract them from the notion of material organs or material substance. With the functions of the brain the case is different. Our conception of thought does not involve any attribute of matter; and we are struck with no speculative absurdity in supposing that our consciousness may survive after every material element, with which it has been connected, shall have perished. Thus the analogy is destroyed between the dependence of thought upon the brain, and that of other functions upon other organs; and the argument founded upon it falls to the ground." (P. 5.)

The remainder of the first chapter is devoted to a consideration of those properties which characterise organised matter, and the differences between the vital phenomena of vegetable and animal life. The properties of life are thus summed up by our author:

> "Upon a strict analysis of the phenomena above enumerated, two properties, to which the whole appear referable, admit of being indistinctly shadowed out.
>
> "1. The change wrought upon the ingesta during assimilation, which appears strictly analogous to some effects of chemical attraction, may be ascribed to a principle of vital affinity. In order to give this term an equal value with the term gravity, physiologists have only to determine with precision the physical conditions which invariably precede changes in the chemical nature of the ingesta, and of the component elements of a living body. It is highly probable that the laws of chemistry, and the property which

controls the affinities of matter in living bodies, will prove eventually to be identical.

"2. The assumption of foreign matter, and its propulsion through the tubes of a living body, may be partially produced or promoted by capillary attraction, by elasticity, by impulse communicated from without, by gravity; but in the majority of instances another principle is distinctly in operation. It is ascertained that various parts in animals and plants alternately contract and expand when alive; or at one time have a tendency to become shorter in one direction, at another to extend themselves to their former dimensions: this property is termed Irritability. The fluids in the higher animals are thus set in motion by the contraction of the vessels which contain them. In the propulsion of the sap of plants, many phenomena prove that the same contrivance is used. It is analogically probable, that in all living bodies a like principle is employed upon this object. It remains for physiologists to determine the exact conditions under which different irritable parts contract or are relaxed." (P. 15.)

"When animal life begins, new properties are added. The polype, which in material organisation is infinitely more simple than the higher plants, gives proofs of sensation, instinct, and volition; yet, when divided, each half grows into a perfect polype. In the ascending scale of animals, the phenomena of consciousness are more and more developed; the structure of the body becomes proportionably more elaborate; the animal becomes individualised; its separate portions become incapable of independent existence; it consists of a single series of organs, the functions of which exert a reciprocal influence, and combine to sustain life." (P. 17.)

In giving this simple but accurate account of the vital properties, we could have wished that Mr. Mayo had not employed the term "irritability," since it has been used by different authors in such various acceptations as to lead to considerable obscurity in physiological reasoning. We observe that many parts of living bodies have the power of contracting in one dimension, upon the application of appropriate stimuli: all substances possessing a power of contraction beyond mere elasticity, are said to be irritable, and the property itself is called by many physiologists Irritability, in which sense the term is employed by Mr. Mayo. In this extended sense of the term, we shall find "that the parts of the human frame which possess irritability are muscular substance, the substance of the uterus, the fibrous coat of arteries, the unattached margin of the iris, some parts of the skin, and perhaps the dense texture which is employed in forming excretory tubes." (P. 35.)

But the term irritability is generally used by other physiologists to designate that kind of contraction only which can be excited by mechanical stimuli, and which occurs exclusively in muscular structure. Thus BLUMENBACH remarks, "Irritability (we mean the irritability of Haller,) is peculiar to the muscles, and may be called the *vis muscularis.*" (Translation by ELLIOTSON, p. 18.)

Restricting the term to the power of shortening in muscular substance, there remain a variety of parts of the body, not muscular, and yet endowed with the power of contraction. Authors who use the term irritability in this limited sense, admit of a specific power of contraction in other textures, distinct from the irritability of muscles. Blumenbach even specifies a third kind of action possessed by some parts of living bodies, the various modifications of which he calls "*vitæ propriæ;*" to which head he refers the motions of the iris, the erection of the nipple, and the action of some other parts.

Muscular structure being irritable, we find further that irritability and muscularity are often used as synonymous terms; and thence arises another source of vagueness and obscurity in physiological language. Muscles are fibrous,—the middle coat of arteries is fibrous: but is it therefore muscular? Judging from analogy, we should answer in the negative, since a muscular coat is in some animals added to the common fibrous tunic. Is it irritable? No contraction ensues on pinching the nerves going to the vessels; and it is at least a disputed point whether any mechanical stimuli are capable of producing the motion of arteries: yet, in medical writings, the action of arteries is constantly spoken of as identically the same with that of muscle. Still less can the power which the vessels of plants possess of propelling the sap, be compared with the irritability "peculiar to the muscles."

We should wish, then, to see the term irritability, in the comprehensive sense attached to it by Mr. Mayo, changed for that used by other authors to designate the same property,—viz. Contractility, which seems to us to be much less liable to be used in different acceptations. Contractility will thus become a generic term, including all motion in living bodies which is effected by a peculiar vital property.

We shall in this manner be enabled to distinguish such bodies as are simply *contractile,* (in which class will be included the vessels of plants, as well as many parts of animals,) from those which are *contractile* and *fibrous* also,—such as the arteries of animals; while, again, we shall find another kind of animal substance which possesses both these peculiarities, which enjoys the property of *contractility,* which is *fibrous,* and which is also *muscular.* All are endowed with the power of contraction,—i. e. they are all irritable in Mr. Mayo's acceptation of the word; but the last only possesses irritability, in the limited sense in which the term is used by other physiologists.

Having pointed out the peculiarities of living beings generally, Mr. Mayo next proceeds to describe the fluid from which all animal bodies are formed. Accordingly we find in the five next chapters an account of the blood, and of the different phenomena of the circulation; including a dissertation on muscular action,—on the forces which circulate the blood,—on the pulmonary circulation and phenomena of respiration,—and on the circulation through the body; in which last chapter the process of secretion is minutely analysed. Some of the subjects which are here described have engrossed so large a portion of the public attention during the last few months, that we are tempted to dwell longer on this part of the work than we should otherwise be induced to do; for we cannot but suspect that more interest has been excited by the ingenious investigations of Dr. Barry, than either their originality or intrinsic importance really entitles them to.

It has been long known that the mechanism of respiration exerts a considerable influence upon the transmission of the blood: this is proved by the turgid state of the veins of the neck during expiration,—by the motion of the brain corresponding with the state of the respiration,—by the occurrence of death in some instances where air has been drawn into a divided vein, through the power of suction exerted by the chest. The recent experiments of Dr. Barry have placed these phenomena in a still more striking point of view; but are we therefore justified in attributing the entire phenomena of circulation and absorption to the influence of this power? No doubt can be entertained, we imagine, that the circulation is assisted by the mechanical influence of atmospheric pressure; but we certainly believe that it is at best only an accessary power, and probably the action of the heart, and that of the arteries, and the resilience of the lungs, are each of them of more importance in the phenomena of circulation; and in many cases atmospheric pressure seems to be wholly out of the question. Thus the empty state of the arteries after death has been clearly shown by Dr. Carson to be owing to the resilient power of the lungs; and it is remarked by Mr. Mayo, that in the fœtal state, and when the circulation is kept up, after laying open the chest, by artificial respiration, that the spontaneous dilatation of the auricles is the only power which can promote the entrance of the blood into those cavities, independent of the vis a tergo communicated by the ventricle and by the action of the arteries. In the latter case, however, may not the elasticity of the lungs exert some influence, so as to interfere in some measure with the accuracy of this conclusion? A curious case, indeed, is extracted by our author from an account published by Mr. Brodie in the Philosophical Transactions, in which no heart was present in an imperfect human fœtus; but the umbilical vein communicated with the vena cava, which was distributed in the usual manner; while the umbilical artery terminated in the left internal iliac, which ended in an aorta having no arch, but only branches which supplied the head and arms, there being no communication between the trunks of the arterial and venous systems.

> "In this and similar cases, it is presumed that motion, limited to one direction by the valves in the venous system, is given to the blood by the contraction of the arteries and of the capillary vessels. Upon a like supposition, the fact has been explained that, after the removal of the heart, if transparent parts of the body be examined in a microscope, the blood is seen to flow for a time in the capillary vessels." (P. 74.)

The following is Mr. Mayo's opinion of the influence of the chest upon the circulation. Speaking of Dr. Barry's experiment, in which a coloured fluid was made to rise during inspiration in a tube inserted into the jugular vein of a horse, he observes—

> "It remains problematical how far this phenomenon be independent of the resilience of the lungs. For if we admit that, were the trachea closed, and the chest to be dilated, the atmospheric pressure being taken off the heart, and operating without resistance upon the veins of other parts, would drive their contents towards the right auricle; yet in natural breathing the trachea is open, and permits the air to enter the lungs as promptly as the chest enlarges: so promptly, perhaps, as, but for the resilience of the lungs, to keep up a pressure upon the outer surface of the heart, equal to that which the air exerts through the column of blood in the veins upon its inner surface." (P. 66.)

To the other question of the influence of atmospheric pressure upon the absorption of fluids, the same remarks are applicable. Whatever power the elevation of the chest will exert upon the circulation of the blood through the veins, must operate in a proportionate degree upon the absorbents which communicate with the veins. The action of the cupping glass in preventing the absorption of poison, (a practical experiment of considerable importance,) is, we believe, more generally acknowledged to be produced by pressure alone upon the vessels, and not by the removal of atmospheric pressure from the mouths of the absorbent vessels, as Dr.

Barry at first imagined. It is no doubt precisely the same as that of a ligature, which has long been known to be attended with this beneficial effect. Recent experiments have proved, we believe, that a simple ring pressed around the place where poison has been inserted, is equally effectual in preventing the entrance of the poison into the system, as when an exhausted cupping-glass is placed over the puncture. And an experiment alluded to by our author in another part of the work is conclusive upon the question, and proves decidedly that absorption will go on, in the lacteals at least, after all influence of the chest has been entirely removed by interrupting the course of the chyle towards the veins by a ligature.

We will pass over the next chapter, therefore, in which an account is given of the function of Digestion, and make the following extract from Chapter VIII. in which is explained the mechanism by which the Chyle, the product of digestion, is carried into the circulation.

> "Thus it appears that the lacteal system originates by numerous capillary orifices upon the villi of the small intestines; and we may presume that the absorption of chyle commences upon physical principles. Accordingly, if the mesentery be exposed immediately after the death of an animal killed during digestion, and the contents of a lacteal be pressed forwards towards the thoracic duct, and a ligature be tied upon the empty vessel, the lacteal is found to become filled again with chyle by the continuance of intestinal absorption. By capillary attraction, the fluid with which it is bathed would ascend in the capillary orifice of a lacteal; and, if it rose beyond a single pair of valves, the contraction of the vessel itself would be sufficient to urge it onward to the venous system." (P. 183.)

Mr. Mayo is inclined to side with M. Magendie in believing that the lacteals absorb chyle only from the intestines, and points out the following probable source of fallacy in Hunter's experiment, in which a solution of starch and indigo was placed in the cavity of the intestine. In repeating the experiment upon a rabbit, he observed—

> "The lacteals, which, when a solution of starch and indigo was first placed in the bowel, were full of chyle, on being examined half an hour afterwards, appeared of a clear blue colour, and those present were for an instant satisfied that the experiment had succeeded; but, upon placing a sheet of white paper behind the mesentery, the blue tinge disappeared,—the vessels were seen to be transparent and empty. On removing the white paper, they reassumed their blue colour." Again—"When Mr. Hunter saw a white fluid rise in the lacteals, after pouring milk into the bowel, we must suppose that some remains of chyle in the small intestine continued to be absorbed." (P. 184.)

As the lacteals evidently possess the power of absorbing chyle, it seems probable, from the similarity of the lymphatics in other parts of the body to the lacteals in the mesentery, that these vessels also are endowed with the property of removing substances presented in a fluid state to their extremities. Such has accordingly been the common opinion, from the time that the lymphatics were first discovered till the last few years, when some curious experiments of Magendie seemed to prove that the power of absorption may belong to other vessels; and many of his partisans, not contented with claiming this property of absorption for the veins, have chosen to carry their opinions so far as even to deny that absorption is at all performed by the lymphatic system.

Mr. Mayo does not go farther than the expression of his belief that "we are at liberty to conjecture, upon analogy," that the function usually ascribed to the lymphatic vessels is actually enjöyed by them; and he remarks, that "this conjecture, at any rate, is the most rational which has been proposed as to the use of the lymphatic system, and is remarkably borne out by various circumstances in diseases." (P. 186.)

As the interesting question of Venous Absorption has also been much agitated of late, we are tempted to give our readers the opinion of Mr. Mayo upon this subject, who attributes many phenomena, usually alledged as those of absorption, to the occurrence of transudation or imbibition in the living subject, as well as in dead matter. The actual occurrence of this mechanical effect in living bodies was long denied, and was probably unknown to Magendie himself when he published his Experiments on the Absorption of Poison by the Veins. We recollect having somewhere seen an acknowledgment by Magendie himself, that, the existence of this property of living bodies being proved, his experiments are no longer conclusive of the absorption by the veins; though we believe, from the usual tenor of medical conversation upon this subject, that the phenomenon of transudation during life is very partially known. Mr. Mayo brings forward, however, at page 115, too many facts to leave any doubt upon our minds of the positive existence of this circumstance. M. Magendie's celebrated experiment, in which he insulated the crural artery and vein of a dog, is well known. M. SEGALAS performed another experiment, which, like Magendie's, clearly proved that poisons may be introduced into the system through the veins. He tied all the vessels of a portion of mesentery, except the lacteals and one large artery. A vein, punctured beyond the ligature, allowed the blood carried through the artery towards the intestine to escape. Some nux vomica was then placed in the intestine; but no symptoms of poison manifested themselves during an hour, although the lacteals remained free. The ligature was then removed from a vein, and in six minutes from this time the poison began to produce its usual symptoms. In speaking of these experiments, Mr. Mayo thus states his opinion upon the proofs which they afford of venous absorption.

> "The preceding phenomena admit of two hypothetical solutions. We may suppose either that the veins possess a special power of absorption, through some mechanism not yet discovered, or that a poisonous substance may find its way through the coats of the vessels, by virtue of that sort of imbibition or transudation which takes place in dead matter, whether organised or unorganised, and which it is analogically probable takes place in living matter as well. The latter supposition has the recommendation of assuming nothing." (P. 115.)
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> "A popular objection to this view is founded upon the fact, that, upon opening the body of an animal immediately after death, the parts adjoining the gall-bladder are not tinged with bile. But it is easier to imagine that the bile is washed away by the circulating blood, or carried off by the lymphatics, as fast as it exudes, than to suppose a new principle in the living body competent to suspend the common law of imbibition by porous substances." (P. 119.)

This principle being established, the importance of the experiments is very much diminished, since they are no longer able to demonstrate that veins have the power of absorbing any substances presented to their extremities; restricting the term absorption to that peculiar operation already described as performed by the lacteals. Still less will the experiments prove that the property of absorption is not possessed by the lymphatic system. All that they are calculated to show is, that, if any substance gets into the blood, it may be carried into the centre of the circulation by the veins; but it has been shown that the poison may reach the cavity of the veins by transudation only. Nor must it be forgotten that it is probable, from comparative anatomy, that other communications exist between the lymphatics and the venous trunks, besides the principal union on each side of the neck.

Having thus described the means by which the chyle is formed, and the means by which it is conveyed into the blood, the two next chapters are devoted to the consideration of the Excretory Secretions of the Kidney and of the Skin. In the chapter on the Skin, besides an account of the perspiration, we find a description of the anatomy of the skin, and of the phenomena of vital heat; the other properties of the skin, as an organ of touch, being investigated in a subsequent part of the work.

We are presented with an elaborate account of the Brain and Nerves in Chapter XI. which is divided into five sections. The first of these is intended to point out such parts of the nervous system as are common to all animals,—viz. "a central organ consisting of two chords, one corresponding with either half of the body, upon which nodular masses are generally placed; and, secondly, of other chords or nerves derived from the central organ to the sentient surfaces, or contractile parts of the animal." (P. 208.) After which are described the common properties associated with the simplest as well as the highest forms of the nervous system, which are those of sensation, volition, and instinct.

Having in the second section given an anatomical description of the human nervous system, Mr. Mayo separates such parts as appear to be necessary to sensation, volition, and instinct, and which belong to man merely as an animal, from those which are connected with the higher faculties. The former are said to be the medulla oblongata and spinal cord; and accordingly, in the third section, many interesting experiments are related to prove that "these parts are likely to be the organs connected with these moral phenomena, which are shared by animals, from a starfish to man inclusively." (P. 232.)

In the two remaining sections, Mr. Mayo has given an account of the functions of the remaining part of the nervous system, namely the Brain; followed by some remarks upon sleep, dreaming, and sensorial illusions.

It is a much easier task, however, to discover such points of physical structure, and those moral phenomena which man possesses in common with all other animals, than it is to account, by any anatomical differences in the brain, for his intellectual superiority over the higher orders of the animal creation. The latter part of this chapter is, therefore, much less satisfactory than the preceding sections. Our limits will only allow of our extracting the following passage:

> "But whatever vestiges we observe of human faculties in animals,—a susceptibility of attachment and of aversion, appetites like those of man, and a seeming sagacity in providing for their wants,—they yet exhibit nothing that can strictly be compared with human reason. Animals appear to share the same first impulses with human beings; but, not having the power to reflect, or deliberate, or conceive, the combination of means for the attainment of an end, they derive little advantage from experience, and want that capacity of indefinite improvement which alone might vindicate for man an exclusive claim to immortality." (P. 215.)

The twelfth Chapter is devoted to an investigation of the five special senses, and is divided into as many sections. The first of these, on the Organs of Vision, is one of the most perfect and satisfactory discussions upon this extensive and difficult subject which we have yet read, and it appears to have received in an especial manner the attention of the author. We extract from it the following recapitulation of the offices performed by the retina, and which result from its form and situation.

> "By retracing our steps from the point at which we have now arrived, we may attain, perhaps, yet clearer notions of the wonderful art displayed in the construction of the eye. The following different ends are seemingly comprehended in its design: 1. Each point of the retina being likely to receive the impression of rays of light at various angles, is so constituted as to refer visual impressions to one direction only, in order that the information conveyed to us may be consistent. 2. The retina is placed behind refractive media, which collect in one point upon its surface the rays that enter the eye from a given point in the object, in order that the same part of an object may not be seen in several places at once. 3. Each point of the retina has a definite inclination, in order that vision may be true; or, in other words, in order that the visual direction of an object may correspond with its tangible direction. 4. The retina is concave, in order to simplify the optical contrivances by which the cones of rays that enter the eye are brought to focal points upon it. 5. The retina being concave, the images of entire objects are necessarily reversed upon it to be seen in their true position; but the retina might have been convex, and then, for correct vision, the images of objects would have been delineated upon it erect." (P. 289.)

We next have, in the thirteenth Chapter, an account of the Human Voice, which is derived principally from M. Magendie's description. This is followed by a chapter on the Attitudes and Movements of Man, in which is included a history of the nature of Bone. The two concluding chapters are on Generation and on Growth; and, in discussing the latter subject, the author has introduced some original experiments of his own to illustrate the nature of the reunion of divided parts, some remarks upon which have already appeared in this Journal.

Such is a general view of the plan which Mr. Mayo has pursued in his System of Physiology. It is, perhaps, unfair to criticise the arrangement of an extensive science, where each function is so intimately connected with the rest; and the difficulty of forming any division which shall be entirely unobjectionable, is evident from the variety in the arrangement of the subject adopted by different writers on Physiology:

yet we are not satisfied that the plan followed by our author might not be materially improved. Neither does the execution of all parts of the work appear to us to be free from faults. We might point out particularly the latter part of the fifteenth chapter, relating to the development of the fœtus, as being evidently drawn up in a hasty and imperfect manner. We may also mention the section upon the Organ of Hearing, as an instance of two or three passages which are written in much too short a form to be easily intelligible to the student. These are faults, however, which can easily be corrected in a future edition; but we fear it would be more difficult to modify the arrangement so as entirely to please us. On the whole, however, it will be evident that we entertain a very high opinion of the work. The passages we have extracted may, perhaps, be sufficient to show, to a certain extent, the talent displayed by the author, and illustrate his usual style. It is clearly his design, in every part of the work, to condense his facts and reasonings into as small a space as possible; a design which is, perhaps, in some parts carried to the verge of a fault, as there are passages so closely written as to keep the mind too much on the stretch in order completely to follow the author's meaning. It is evidently the composition of a powerful and sagacious mind, and for the most part is couched in language proportionably terse and energetic; and this is most satisfactorily shown in those parts which require the greatest exertion of ingenuity and talent, such as the chapters on the Brain and on the Eye, which are distinguished by a degree of acuteness and logical precision very unusual in medical writings. Entertaining this opinion of Mr. Mayo's work, we most strongly recommend it to the perusal of our readers.

Observations on the System of Teaching Clinical Medicine in the University of Edinburgh, with Suggestions for its Improvement; humbly submitted to the Consideration of the Patrons and Professors of that Institution. By JAMES CLARK, M.D.—1827.

DR. CLARK is already favourably known to our readers as the author of an excellent little work on the Medical Topography and Statistics of the South of France and Italy, and as the spirited defender of British medicine, in two Italian Tracts published at Rome four or five years ago. The pamphlet before us, which we believe is only printed for private distribution, is on a subject of the greatest importance, not merely to the University of Edinburgh, but to every professional man who has at heart the interests and honour of the body to which he belongs. What the author says of Edinburgh, applies *a fortiori* to the London School, which can hardly be said to have even the semblance of clinical lectures. In a few of our hospitals, it is true, lectures are occasionally given; but there neither is, nor ever has been, in this great city a formal course of clinical medicine for the progressive instruction of the pupil. We hope this reproach is not to be perpetual, and we now call upon our hospital physicians to consult not only the interests of the profession, but their own personal fame and advantage, in instituting regular courses of clinical lectures.

Our readers will give us credit for sincerity when we say that we are none of those who run after every novelty of doctrine or practice that may be brought forward; and still less are we disposed to surrender the sterling and energetic practice of England, to the ultra-refinements of the present fashionable dogmas of the continental schools. At the same time, we have ourselves derived too much benefit from viewing the good and the evil of foreign practice,—and especially from the minute and unlimited inspection of bodies after death,—to doubt for a moment that the best of all schools for an observant and a sober-minded practitioner, is the wide school of continental Europe. At all events, it is only there where a just idea of what clinical medicine is, and what clinical instruction can effect, is to be obtained. It is only by observing better systems that we are led to discover the defects of our own; and we must consider the whole profession of this country under great obligations to Dr. Clark for making them acquainted with the very superior manner in which clinical medicine is taught in foreign countries. Well will it be for the University of Edinburgh if she listens to the voice of her son, and adopts some part, at least, of his friendly suggestions: and evil, we fear, if not shame and disgrace, will come upon her, if, too confident in former fame, she disregards these improvements which the spirit of the age demands, and on which alone she can securely rely for making the future equal to the past.

It appears that at this very time a royal commission is engaged in an inquiry into the state of education in the Scottish universities. It is this circumstance which has called forth the observations of Dr. Clark; and when we consider the earnestness and zeal, and at the same time the moderation and good sense, with which these are written, and, above all, the unanswerable reasons he adduces in favour of the proposed changes, we cannot help entertaining a confident hope that his pleading will have weight with those to whom it is addressed, and who have the power to make the requisite improvements.

"I would therefore, (says Dr. C.) in common with every member of the profession who has its real interests at heart, beseech you to consider well before the final arrangements are made,—to avail yourselves, to the full extent, of the fair opportunity which is now afforded of rendering the system of medical education in the University of Edinburgh equal, if not superior, to that of the best medical schools on the continent. It may be long before so favourable an occasion shall again offer; and, if the present inquiry is allowed to pass over without effecting material improvements in the course of medical education, the consequence will, in all probability, prove not a little injurious to the future interests and reputation of your school. Upon what is done now will depend the station which the medical school of Edinburgh is to hold, for the future, among similar institutions in this country; whether it is to stand pre-eminent as heretofore, or to be speedily surpassed by others. Recollect that what you do not may, and most likely will, be done by other medical schools, and Edinburgh will be ultimately compelled to follow in the march of improvement when she should have led; and may be reduced, perhaps, in consequence, to see her halls deserted in the department of science to which she has been indebted for her most extended celebrity."

Of the justice of the following remarks on the importance of clinical instruction, there can only be one opinion. We ourselves can bear mournful testimony as to how much time may be strenuously mis-spent in early attempts to study medical science, through a defective system, and owing to the want of a good clinical guide.

"Of the various branches of medical education, clinical instruction is, beyond all question, the most important, and is, in truth, that to which the others are merely preparatory and subservient. It is only at the bedside of the sick that the pupil, guided by an experienced practitioner, can make with advantage, or ought to make at all, his first acquaintance with diseases, or learn to observe them with the accuracy which they require. He may, indeed, have heard excellent descriptions of disease delivered in lecture-rooms, and read much of it in books; but the impressions he receives from such sources are faint and transitory, compared with those produced by actual intercourse with the sick. Personal observation, therefore, is absolutely necessary to the right investigation and conception of the phenomena of disease; but, in proportion as the first impressions produced by these are strong, is it of importance that the pupil's observation should be rightly directed. This can only be done by a well-conducted system of clinical instruction." (P. 3.)

"In the foreign universities, generally speaking, there is no part of the physician's education watched with more jealousy,—and there is no class of professors whose appointment excites more general interest than the clinical professors, or in whose selection and nomination greater care is taken that none but such as are well qualified for the office shall obtain it. In the case of no other professor, indeed, is there required a greater combination of the rarer qualities of the physician; and no one certainly has more important duties to perform. Upon his efforts, favoured by a judicious system, depends, in a great degree, the pupil's future progress in his profession. According to the direction which his mind receives during his clinical studies, is he, in all probability, to become an accurate observing physician, or an empirical writer of prescriptions. There can be little doubt that to a defective clinical education, more than to any thing else, is to be attributed the large proportion of routine practitioners in the profession,—of men who blindly follow the beaten track of their predecessors, without knowing or inquiring whether it is right or wrong; because, having never learned properly to observe disease for themselves, or to reason upon its phenomena, they can derive but little advantage from experience. For the truth of these remarks, I appeal to those members of the profession who have themselves suffered from a defective medical education, and who, after groping their way for years without deriving much advantage from their experience, have at length acquired the power of observing disease as it must be observed to be understood. How different is their future practice, both as regards their own improvement and their patients' welfare!—and how much more might they, as well as their patients, have profited by their early practice, had they enjoyed the advantages of a good clinical education! It is in a clinical course only, with the examples before him, that the professor can impress effectually upon the pupil's mind the necessity and the manner of observing minutely the symptoms of disease, in order to enable him to trace the connexion which exists between them and the morbid conditions of which they are the signs. And it is here only that the pupil can learn to distinguish the symptoms of disease from disease itself, or discriminate the signs which are merely indicative of functional derangement from those which are characteristic of organic change. Nor will the professor fail, as the examples offer, to point out the manner in which the phenomena of disease are modified by age and sex, by peculiarities of constitution, and by the existence of previous disease, either in the organ affected or in the neighbouring organs: neither will he omit to remark the effects which any epidemical influence reigning at the time may have in modifying the character of the diseases under treatment; as these are all circumstances which affect most materially the degree, the progress, and the issue of the disorder, and which require a corresponding modification of treatment. But above all, I repeat, it is his paramount duty to impress upon the pupil's mind the necessity of minute and comprehensive observation, as the surest protection against those wild theories and sweeping generalisations, which still continue to disfigure medical science, and which produce the most injurious effects on the minds of youth, by leading them aside from what I consider the only true path in which to attain sound practical knowledge." (P. 15—17.)

The following brief statement points out what our author considers defective in the present system of teaching clinical medicine in the University of Edinburgh. This is defective, he says—

"1st. Because the period of attendance required of the candidate for a medical degree, is not sufficiently long to admit of his acquiring such a share of practical knowledge as every graduate ought to possess.

"2d. Because one, or even two professors are not sufficient to teach clinical medicine efficiently to the number of medical pupils at present frequenting the University of Edinburgh.

"3d. Because the professor has too many patients to examine and prescribe for, during the time allotted to the clinical visit; which ought to have for its object the instruction of the pupil, as well as the treatment of the sick.

"4th. Because the clinical lectures are but few.

"5th. Because the pupils have little or no opportunity of acquiring any practical experience under the direction of the professor.

"6th. Because the clinical professor retains the charge of the clinical wards for too short a period at one time, and resumes it at too distant intervals." (P. 18.)

And he proposes to remedy these defects—

"1st. By increasing the period during which the candidate for a medical degree shall be required to attend to clinical medicine, (as, without sufficient time, he cannot possibly acquire a knowledge of practical medicine, however fair the opportunities held out to him may be).

"2dly. By increasing the number of clinical professors in office at the same time.

"3dly. By diminishing the number of patients under the charge of each professor.

"4thly. By increasing the number of clinical lectures.

"5thly. By making the office of clinical professor permanent, or fixed at least for a series of years, in the same individuals.

"And lastly. By instituting a practical clinic, upon the principle of the poly-clinics of Germany." (P. 19.)

We have not space at present to enter into all the details of these proposed amendments: we shall content ourselves with one or two extracts illustrating some of the principal points dwelt upon by our author. The following account of the German clinics is interesting: it is a modification of the system that Dr. C. proposes for the University of Edinburgh.

"There are two methods of teaching clinical medicine adopted in the medical schools of the continent, and two different kinds of clinical institutions. One of these may be called the *hospital clinic;* and the other, which is chiefly in use in Germany, is called there the *poly-clinic* or *ambulatory clinic.*

"In the hospital clinic, the elder pupils are appointed to attend to certain patients, of whom they may be said to have the charge, under the immediate inspection of the professor. They draw up the history of the cases under their care, and are examined on the nature of the disease by the professor, in the presence of the other pupils. They are also required to point out the symptoms which more especially characterise the disease, and serve to distinguish it from others which it most nearly resembles, and with which it might be confounded; and, finally, to give the prognosis and method of treatment. Those pupils continue to attend the same patients; and at every succeeding visit they examine, under the eye of the professor, the state of the symptoms, inquire into the effects of the remedies prescribed, &c. Of the whole case they keep a faithful record. If the disease should prove fatal, the attending pupil is further required to state, previously to the examination of the body, (a thing which is never omitted,) the morbid conditions which he expects to find, and what he considers to have been the cause of death." (P. 5, 6.)

"The poly-clinic of the German schools resembles closely our general dispensaries. As in them, the patients with chronic diseases, who are able to come abroad, are examined and prescribed for at the clinical rooms, and those labouring under acute diseases are seen and treated at their own houses.

"The pupil is first exercised in examining the patients that come to the clinic, under the observation of the professor, and is required to state the nature of the disease, its treatment, &c. as in the hospital clinic. The treatment being agreed upon, the pupil writes the prescription, which is examined, modified if necessary, and signed by the professor. After a time, the pupil is entrusted with the care of the out-patients. He is required to draw up an accurate history of each disease under his care, which is submitted to the inspection of the professor; as are also the reports of the progress and treatment of the case. Moreover, when he finds himself in difficulty, or the case appears to the professor to require it, the clinical assistant accompanies him to see the patient, and assists him with his advice. In urgent cases, I believe, the professor also visits the patient; and, where the disease proves fatal, he superintends the examination of the body; a practice to which, on the continent, objections are very rarely made." (P. 8.)

From the following account of the length of study imposed on the pupils of the continental schools, we cannot help turning, with something like shame, to consider the regulations that obtain in several of our British institutions. From this statement, it were well also if some other of our authorities, as well as Edinburgh, took a lesson. In common with all the well-wishers of science, we are sorry to observe that the dignity of our profession is daily wounded by unworthy members, who, envious of those above them, strive—not to raise themselves by honourable means—but to drag their more successful competitors down to their own level: and we know of no method so likely to avert this evil, as that of raising the standard of qualifications for those who present themselves for legal authority to exercise the respective branches of the profession. Sure we are, that degrees and licences are at present too much within the reach of ignorance and inexperience.

> " Respecting the time, also, during which the pupil is required to attend to clinical medicine, the difference between the two systems is not less remarkable; and here, again, the advantage is greatly on the side of the foreign schools. According to the statuta of the Edinburgh University, six months' attendance on the clinical course, and the same length of time at any respectable hospital, is all that is required of the candidate for a medical degree. In the foreign universities, the period of attendance is much longer. At Pavia, which may be taken as an example of the practice at all the medical schools in the Austrian dominions, the pupil is required to attend the medical clinical course during four sessions, or two scholastic years. At the University of Turin, the same period is exacted; and at those of Paris and of Pisa, two full sessions. These may be taken as examples of the length of the clinical course at the continental medical schools. But this is not all: the period I have stated is requisite to qualify the pupils for taking the degree of doctor of medicine, but does not qualify them to practise. To obtain this privilege, they must have passed a considerable time, after graduation, in some hospital; or have attended the practice of a physician. The period prescribed in Austria, in Piedmont, and in Tuscany, is two years; and, in the latter country, the graduate of the University of Pisa must pass the two years of probation at Florence or Siena. After the completion of the period of probation, the graduate undergoes another examination on practical medicine, and must be approved of by his examiners, before he is admitted to the *libera praxis* of his profession. In Prussia, the period of probation is not so long; but the medical graduates, after having attained the degree of doctor of medicine in any of the universities of the kingdom, are obliged to pass some months at Berlin, when the schools are in activity; and are required to give proofs of their acquaintance with practical medicine, before they are permitted to practise." (P. 12, 13.)

The present notice of our author's views and proposed improvements will meet many eyes beyond the circle to which the original paper must be confined; and we trust it will not meet every eye in vain. Strange, indeed, it will be if, among the hundreds of hospitals and dispensaries that flourish in this country, none shall be found ready to adopt improvements at once so great, so obvious, and so easy. We, however, augur better things; and we yet expect to see the day when clinical medicine shall be as well understood, and as justly appreciated in this country as in Germany, France, and Italy. Reforms of this kind shall always find in us staunch and zealous supporters, because they tend directly to improve and elevate the character of our profession; and because the motives in which they originate are as pure as the ends sought to be attained by them are beneficial. Here we have no fierce and unworthy passions secretly at work, struggling for vent like the imprisoned fires of the volcano, and striving to undermine and level with the ground all noble and venerable monuments of former times. Here we have no smooth-tongued backbiter, who stabs in secret the reputation he dares not openly to assail;—no furious and unprincipled incendiary who hopes, by the destruction of all protecting institutions, to build his fortune on the ruin of all that is dignified, respectable, and respected. In the little work before us, if we have the zeal of the reformer, we have also the good faith of the patriot, and the respect and affection of the son and pupil. The hand that uncovers the blemishes, does so with gentleness and reverence, and, like the surgeon, only does so to heal them. The ambition of the author seems to be akin to the spirit which, during the last twenty years, has been gradually transforming the rude and incommodious buildings of the old University of Edinburgh into one noble and splendid pile, worthy at once of the objects for which it is destined, and of the liberal taste of the age. He seems only anxious for the adoption of his proposed improvements, because he is convinced they will add to the strength and beauty of the moral fabric of his Alma Mater. In this opinion we entirely coincide; and we shall ever be proud to support and encourage those who come forward as the true friends of our antient and venerable seminaries of learning, convinced as we are that their welfare is essentially connected with the prosperity of the country.

Répertoire général d'Anatomie et de Physiologie, Pathologiques, et de Clinique Chirurgicale; ou, Recueil de Mémoires et d'Observations sur la Chirurgie, et sur l'Anatomie et la Physiologie, considerées dans les tissus sains et les tissus malades. No. III. —Paris, 1827.

THE first paper in the present Number of the Repertoire is from the pen of M. BRESCHET, upon the subject of *Ectropium of the Organs of the Circulation, and particularly of the Heart.* As it does not bear upon points which are practically important, we shall give it but brief attention. M. Breschet observes, that the study of the preternatural arrangement of parts has developed many facts respecting the animal organisation, and has given a solution to many problems concerning organic evolution. It will be easy, he thinks, to show that many affections peculiar to early infancy are not accidental, but a consequence of some fault in the primitive organisation. Whenever the heart has been found wanting, there has always been detected great irregularity in the other parts of the circulating apparatus. Absence of the heart has scarcely ever been observed, excepting in fetuses of monstrous formation. The brain and spinal marrow have either been defective or entirely wanting. Acephalous monsters are generally without a heart. BRESCHET, MECKEL, and TIEDEMANN, have each observed this fact. The more or less complete absence of the heart, with a regular distribution of the arteries and veins, affords one of the strongest arguments in opposition to the theory of HALLER, concerning the original appearance and development of those organs. According to that great physiologist, the heart is the *punctum saliens, primum vivens,* and the vessels proceed from it.

A great variety of writers have described various malformations and preternatural positions of the heart: M. Breschet confines himself principally, in the present paper, to particular points which have escaped previous observation. Five cases are related of preternatural formation of the heart, brain, &c. which are further illustrated by plates in the accompanying Atlas. The paper concludes by a few general reflections and conclusions upon the subject of such malformations, which may be perused with some interest by those who are devoting their attention to occasional deviations from the common march of nature.

Memoir upon the Original or Congenital Displacement of the Head of the Femur. By Baron DUPUYTREN.—This distinguished surgeon observes, that there is a kind of displacement of the superior extremities of both femurs, which he cannot find mentioned by any author, although he has made extensive researches. The principal objects of the paper are to prevent practitioners from forming erroneous opinions of the nature of such cases, and to rescue patients from the useless and severe modes of treatment, which are sometimes thought necessary.

The displacement consists in a transposition of the head of the femur from the acetabulum into the external iliac fossa. It is seen from birth, and appears to result from a considerable defect in the acetabulum, rather than from any accident or disease. The displacement of the parts is similar to that which constitutes luxation of the femur upwards and outwards. Two kinds of luxation of the head of the femur are already known, accidental and consecutive, spontaneous or symptomatic. Baron Dupuytren applies the term of Original or Congenital Luxation to the species he describes, in order to distinguish it from accidental or spontaneous luxation of the bone. This luxation is characterised, like all those in which the head of the femur is carried upwards and outwards, by a shortened state of the affected limb; a rising of the head of the bone into the external iliac fossa; projection of the great trochanter; retraction of almost all the muscles of the upper part of the thigh towards the crista of the ilium where they form, around the head of the femur, a sort of cone, the base of which is at the os ilium, and the apex at the great trochanter. The tuberosity of the ischium is almost denuded, in consequence of its being deprived of its muscular covering. The limb is rotated inwards, and consequently the heel and calf of the leg are thrown outwards, and the toes and the knee inwards. There is an obliquity of the thighs from above downwards, and from without inwards, which is greater in proportion as the subject is more advanced in age, and as the size of the pelvis is more ample; and from which direction of the limb results a disposition of the femurs to cross each other at their inferior part. The whole limb is also emaciated, particularly its superior part. Its motions are necessarily impeded. There is an evident want of proportion between the upper and lower extremities of the individual, which is very observable if he be examined in a standing posture. The trunk of the body is fully developed, while the inferior extremities are short and small, as if they belonged to an individual of smaller stature. The attitude of such persons is also very peculiar. The upper part of the trunk is thrown backwards; the vertebral column projects very much forwards; the pelvis is placed almost horizontally upon the thigh-bones, and the points of the feet only touch the ground. These circumstances evidently result from the transposition of the ilio-femoral articulation, and from the centre of motion being thrown more backwards than usual. When persons who are thus formed attempt to walk, they rest upon the toes, and incline the superior part of the trunk towards the limb which is to support the weight of the body. The foot of the opposite side is raised from the ground, and the weight of the body transferred with evident difficulty from one side to the other; and each time that this is effected, the head of the femur which receives the weight of the body may be distinctly seen to rise into the external iliac fossa, the pelvis sinks down, and all the characters of the displacement become more apparent on this side; while on the other they are much diminished, until the moment when the limb receives, in its turn, the superincumbent weight: the effects of the displacement are then strongly marked, and are proportionably diminished on the opposite side. The cause of the painful and laborious efforts in walking is from the head of the femurs not being fixed, and from their being continually displaced. They are alternatively elevated and depressed, according as they have to bear the weight of the body, or as they are relieved from it. It will be easily conceived that so painful a locomotion prevents such individuals from going long distances.

In an horizontal position, the effects of this malformation are less visible, and in this position of the body the affected limbs may be shortened or lengthened at pleasure. To lengthen them it is only necessary to apply a slight extending force upon the extremity of the femurs, while they are shortened by being pushed towards the pelvis; and, if we compare the crista of the ilia and the top of the trochanters, it will be evident that, in these experiments, the heads of the femurs undergo a displacement of from one to two, or even to three inches, according to the age, the size, and the constitution of the individual. The position of the parts may be thus altered with the greatest facility, and without the production of the slightest pain. It is clear, then, that no disease can be present, and that the heads of the bones are not furnished with the natural cavities for their reception.

The diagnosis of this species of luxation is particularly important: it presents all the symptoms of that which results from disease of the articulation, and it has always been confounded with it, and, by an inevitable consequence, has been submitted to the same treatment, although it constitutes only a vicious formation of parts. In consequence of this error in the diagnosis, Baron Dupuytren has known some patients confined to their beds for several years with this original luxation, and others obliged to submit to leeching, blistering, repeated applications of moxa, &c. &c. The absence of all pain, swelling, abscess, fistula, or cicatrix; the simultaneous existence of luxation on both sides; the history of the individuals affected with this malformation; the appearance of the first symptoms, from the moment the individual attempts to walk; the progressive development of those symptoms, in proportion as the superincumbent weight of the body is increased, are means of distinguishing this species of luxation, which so materially differs in its origin, nature, and treatment, from other kinds of displacement of the femur. One very important circumstance to be observed is, that both the hips present the same alteration of form, a fact which so rarely occurs in disease of the articulation of the joint, that it may almost be deemed characteristic of the peculiar kind of formation just described. The history of such persons will be found to corroborate the proofs above adduced. They declare they have never suffered pain in the joint, and, in short, that they have been free from that severe and painful train of symptoms which generally leads to spontaneous luxation of the femur. And if the history be attentively pursued, it will lead to more than a negative result: it will explain, in a very positive manner; the early symptoms, progress, and development of the effects of congenital luxation of the hip-joint. As it rarely happens that the attention of the parents is directed to the fact until the child begins to walk, the surgeon is seldom called in till that period. When the dimensions of the pelvis are increased, and the child undertakes longer and more fatiguing exercise, the mischief then becomes more apparent.

The cause and nature of the evil, however, are still undetected, even by most professional observers. Many erroneous opinions are suggested as to the original cause of the deformity. Amongst others, a scrofulous diathesis is frequently suspected; and it must be confessed that the leucophlegmatic and rickety appearance of such individuals would give some weight to the opinion, if Baron Dupuytren had not witnessed such a faulty conformation in infants of a totally different constitution, and in whom no appearance of disease was to be observed. Upon dissection of the parts, no signs of actual or previous disease are to be detected.

At a more advanced age, when each sex assumes its distinctive marks, the more rapid growth and extent of the pelvis in the female render the effects more evident than in the male. With but moderate attention, any doubts that may previously have existed will now be removed. Each time that the femurs have to support the weight of the body, they are *disarticulated*, if the expression may be permitted.

The opportunities of determining by dissection the nature of this singular species of luxation are very rare. Life is not endangered by such an infirmity, and consequently Baron Dupuytren has only been able to study it in a few individuals who have perished from accident, or disease quite independent of the affection of the hip. The appearance of the muscles around the joint is considerably altered. Some are remarkably developed, whilst others are diminished in size. The action of the former has been preserved; that of the latter has been interrupted; and those of which the motions have been the most impeded are reduced to a fibrous and yellowish state, and in them we search in vain for any trace of muscular fibre. The superior part of the femur preserves its natural form and dimensions, excepting the internal and anterior side of the head of the bone, which is not so round as usual, in consequence of the friction it has undergone against parts not organised to receive it. The acetabulum is entirely wanting, or presents only a slight osseous and irregular surface, in which no articular cartilage nor synovial capsule is to be seen. It is surrounded with firm cellular tissue, and covered by the muscles which are inserted in the lesser trochanter. In two or three subjects examined by the Baron, the round ligament was much lengthened and somewhat flattened, and worn in particular parts by the pressure and friction of the head of the femur, which is found lodged in a cavity very similar to that which is observed in cases of accidental luxation. This cavity is very superficial, and without a well-defined margin. It is situated in the external iliac fossa, above and behind the acetabulum. In short, the appearances are similar to those which are observed in cases in which spontaneous or accidental luxation has occurred; with this difference, however, that every circumstance marks a very distant period, and seems to indicate an original faulty disposition of the parts.

The question to determine is, what can have been the cause of such a displacement, without any observable disease, and without any accidental violence? May it be considered as the result of some diseased action of the fetus in utero, which was spontaneously cured before birth, or the effect of some violence by which the head of the femur had been thrown from the acetabulum, which had been obliterated, without disease, in consequence of being thus rendered useless, and without its natural employment? M. Breschet has imagined that the acetabulum, which is formed by the union of three bones, may have been thus imperfectly formed in consequence of some obstacle to the evolution of those bones. Baron Dupuytren offers a few observations upon each of the explanations he has submitted. The fetus in utero, it is well known, is subject to many diseases, which may terminate either by a spontaneous cure or by its death, before birth. It is possible, then, that a disease similar to that which leads to luxation of the femurs, might produce the above kind of malformation. There are many circumstances, however, which militate against such an event. In the first place, all the children in whom such a displacement of the hip-joints was observed were healthy at the moment of their birth, which would hardly have been the case if they had previously suffered from a disease of so severe a nature as to have produced luxation of the femurs; and, again, no swelling, abscesses, or fistulous openings have ever been detected. It would appear that the displacement must rather be attributed to some violence which had forced the head of the femur from the acetabulum. To explain the manner in which such violence may have been applied, Baron Dupuytren offers the following remarks, which he thinks renders the cause he has adduced more probable: The position of the inferior extremities of the fetus in utero is such, that the thighs are powerfully bent upon the belly. The heads of the femurs make a continual effort against the posterior and inferior part of the capsule of the articulation. No injurious effects may result from this circumstance, if the fetus is of a firm and robust constitution; but if, on the contrary, it is of a lax fibre, and the tissues offer less resistance, the parts may suffer displacement: the posterior and inferior part of the capsule of the joint yields, and allows the head of the femur to pass. Luxation, in fact, takes place. To understand the displacement of the bone upwards and outwards, it must be remembered that the most powerful muscles which surround the articulation of the hip constantly tend to draw the head of the bone in that direction, when once it has escaped from the acetabulum.

M. Breschet infers from his own investigation of the subject, and from the labours of other modern anatomists, upon the evolutions of the embryon and fetus, particularly with respect to the osseous system, that the points the last developed are those in which either cavities or eminences are subsequently to exist; and that this tardy completion of parts is especially the case where several bony parts are to be united.

The application of this suggestion to the subject in question will easily be conceived. Baron Dupuytren truly enough observes, that, provided we could remedy the evil he has described, we might easily console ourselves for our ignorance of its cause. Unfortunately, however, in such cases we can do but little. By extension of the inferior extremities, we may perhaps for a moment bring them to their natural length; but, as the head of the femur has no cavity prepared to receive it, the limb would of course be retracted as soon as the extending power was no longer applied. The evil may, perhaps, admit of alleviation by palliative treatment, although not of a radical cure. If we bear in mind the natural tendency which the heads of the femurs have to ascend towards the external iliac fossa, and that the cause of such disposition to rise is, first, the weight of the body, which continually is tending to press downwards the pelvis between the femurs, and, in the second place, the action of muscles surrounding the head of the bone, the indications by which we must be regulated in our palliative efforts will be evident. It will obviously be necessary to prevent, as much as possible, the weight of the body from bearing upon an articulation which is thus imperfectly formed, and also to prevent the muscles from acting upon the femur, which, in consequence of the malformation of the joint, is not kept in its situation, nor restrained from rising towards the external iliac fossa. Rest, then, is one of the first means of preventing the head of the femur from rising, as it sometimes does, even to the crista of the ilium; and the sitting posture, in which the weight of the parts above bears upon the tuberosities of the ischium, instead of upon the ilio-femoral articulation, will be the most advantageous. Such occupations, therefore, as may be compatible with the sitting posture must be recommended for those who are labouring under this affliction, if they should be compelled to earn their livelihood.

Baron Dupuytren recommends the daily use of the cold bath, for three or four minutes. He presumes that the effect produced will be to strengthen the parts surrounding the accidental articulation, and to restrain in some degree the tendency which the heads of the femurs have to rise. A belt should also be worn surrounding the pelvis, which should pass over the great trochanters, and maintain them in an invariable position, by which the constant vacillation of the body upon a joint without an articulating cavity may be restrained. The belt should be placed upon the narrow part of the pelvis, between the crista of the ilium and the trochanters. It should be about three or four fingers' breadth, according to the age and stature of the patient. It should also be stuffed with cotton or horse-hair, and covered with buckskin, that it may not injure the parts to which it is applied. On the internal part, and at the lower edge of the belt, must be made narrow and superficial hollows, to receive the trochanters, and to maintain them in their situation. It must be confined round the pelvis by means of buckles and straps, and kept constantly in the position in which it is first applied by broad straps passing under the thighs, stuffed and covered like the girdle itself, and a little hollowed opposite the tuberosities of the ischia. Baron Dupuytren does not profess to have relieved entirely by these means the inconveniences of congenital luxation of the femurs: they have, however, been relieved in a certain degree. As a proof of the advantages of the belt applied in the above manner, he observes, that some patients, who became tired of wearing it, were again obliged to make use of it, as without it they had no firmness in the hips, nor could they walk with confidence.

In conclusion, the Baron remarks that congenital luxation of the femur is not so uncommon as may be supposed: he has seen twenty cases during the last eighteen years. He considers it worthy of observation that almost all the patients were females: not more than two or three were males out of the above number.

Three plates are given in the Atlas, representing, in three different aspects, the trunk of a young person of twelve years of age, affected with congenital displacement of the femurs.

We have dwelt so long upon the novel and very interesting discussion of Baron Dupuytren, that we can but mention the titles of the two next papers. The first is a brief Memoir by MM. H. BRESCHET and H. M. EDWARDS, describing some *Experimental Researches upon Pulmonary Exhalation*; and the second by M. A. LEMBERT, upon *Enteroraphia.*

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"The poly-clinic of the German schools resembles closely our general dispensaries. As in them, the patients with chronic diseases, who are able to come abroad, are examined and prescribed for at the clinical rooms, and those labouring under acute diseases are seen and treated at their own houses.

"The pupil is first exercised in examining the patients that come to the clinic, under the observation of the professor, and is required to state the nature of the disease, its treatment, &c. as in the hospital clinic. The treatment being agreed upon, the pupil writes the prescription, which is examined, modified if necessary, and signed by the professor. After a time, the pupil is entrusted with the care of the out-patients. He is required to draw up an accurate history of each disease under his care, which is submitted to the inspection of the professor; as are also the reports of the progress and treatment of the case. Moreover, when he finds himself in difficulty, or the case appears to the professor to require it, the clinical assistant accompanies him to see the patient, and assists him with his advice. In urgent cases, I believe, the professor also visits the patient; and, where the disease proves fatal, he superintends the examination of the body; a practice to which, on the continent, objections are very rarely made." (P. 8.)

From the following account of the length of study imposed on the pupils of the continental schools, we cannot help turning, with something like shame, to consider the regulations that obtain in several of our British institutions. From this statement, it were well also if some other of our authorities, as well as Edinburgh, took a lesson. In common with all the well-wishers of science, we are sorry to observe that the dignity of our profession is daily wounded by unworthy members, who, envious of those above them, strive—not to raise themselves by honourable means—but to drag their more successful competitors down to their own level: and we know of no method so likely to avert this evil, as that of raising the standard of qualifications for those who present themselves for legal authority to exercise the respective branches of the profession. Sure we are, that degrees and licences are at present too much within the reach of ignorance and inexperience.

> " Respecting the time, also, during which the pupil is required to attend to clinical medicine, the difference between the two systems is not less remarkable; and here, again, the advantage is greatly on the side of the foreign schools. According to the statuta of the Edinburgh University, six months' attendance on the clinical course, and the same length of time at any respectable hospital, is all that is required of the candidate for a medical degree. In the foreign universities, the period of attendance is much longer. At Pavia, which may be taken as an example of the practice at all the medical schools in the Austrian dominions, the pupil is required to attend the medical clinical course during four sessions, or two scholastic years. At the University of Turin, the same period is exacted; and at those of Paris and of Pisa, two full sessions. These may be taken as examples of the length of the clinical course at the continental medical schools. But this is not all: the period I have stated is requisite to qualify the pupils for taking the degree of doctor of medicine, but does not qualify them to practise. To obtain this privilege, they must have passed a considerable time, after graduation, in some hospital; or have attended the practice of a physician. The period prescribed in Austria, in Piedmont, and in Tuscany, is two years; and, in the latter country, the graduate of the University of Pisa must pass the two years of probation at Florence or Siena. After the completion of the period of probation, the graduate undergoes another examination on practical medicine, and must be approved of by his examiners, before he is admitted to the *libera praxis* of his profession. In Prussia, the period of probation is not so long; but the medical graduates, after having attained the degree of doctor of medicine in any of the universities of the kingdom, are obliged to pass some months at Berlin, when the schools are in activity; and are required to give proofs of their acquaintance with practical medicine, before they are permitted to practise." (P. 12, 13.)

The present notice of our author's views and proposed improvements will meet many eyes beyond the circle to which

COLLECTANEA.

Floriferis ut apes in saltibus omnia libant,
Omnia nos, itidem, depascimur aurea dicta.

PHYSIOLOGY.

Remarkable Case of Triple Dentition.

Elizabeth, wife of Dominique Morelli, healthy, and always having enjoyed good health, with the exception of toothaches, (for which she was, each time she had them, obliged to lose blood, sometimes repeatedly.) She was mother of four infants. In one attack of toothache, towards the middle of the month of March, 1821, after having suffered very much from the two last molares of the left side; she had them drawn. However, towards the end of October of the same year, extremely sharp pains preceded the cutting of two new teeth, which replaced those removed. In January, 1826, these new teeth becoming loose, and causing much pain, were removed also: they were white and beautiful, without any appearance of caries.

July 16th, M. Aimonino, who relates the case, was consulted by Madame Morelli, who complained of intolerable pains, and had an inflammatory toothache. Antiphlogistics and depletions were tried, without success; and, on the 18th, the patient discovered that a third supply of these two teeth was about to make its appearance; accordingly they soon protruded through the gums, when the pains ceased.

(*Repert. Med. Chirur. &c. de Torino.*)

PATHOLOGY.

Metastasis of the Milk.—We are much surprised to find M. Graefe, of Berlin, report the following as a case of metastasis of the milk.

A young woman, the wife of a miller in Saxony, had been lately confined, and was nursing her babe. Eight days after her confinement, in consequence of some accident occurring to the mill, she was so frightened that the secretion of milk ceased. A violent intermittent fever supervened, which became a tertian. In the course of the fever, the patient had œdema of her legs, which daily increased. Three weeks after, this œdema became general. As the ascites was considerable, and means were inefficacious, M. Graefe was called in to puncture the abdomen. The puncturing gave issue to a quantity of fluid like whey, smelling sour, and which, submitted to boiling with diluted sulphuric acid, coagulated, and gave a perfectly cheesy substance. Diuretics were prescribed; the solution of Acetate of Potass, Digitalis, Squills, Juniper, &c.; but in vain: it was necessary to repeat the puncturing. This time the fluid evacuated was glutinous, of a greenish yellow, and contained no cheesy matter. After this the patient gradually got better under the use of diuretics and tonics.

(Hufeland's *Journal.*)

PRACTICAL MEDICINE.

Mercurial Frictions in Puerperal Peritonitis.—M. Velpeau, in a Memoir published in the Revue Medicale, after deploring the inefficacy of our remedial treatment of puerperal peritonitis, proposes, as a means of cure, mercurial frictions on the belly. He orders two drachms of mercurial ointment to be rubbed in on the surface of the abdomen, and repeated every two or three hours. Much depends on the regularity with which this is done. After two or three frictions, should the symptoms not be ameliorating, he has the belly anointed with oil, and washed with soap and water, and the frictions recommenced. One would at first expect that the acute pain felt by patients in the abdomen would prevent the use of frictions: he says, that pain is not in the skin of the abdomen, but in the inner side of the muscles of the pariëtes; and therefore, that very gentle frictions with the hand of a person tenderly interested in the fate of the patient, does not increase the suffering, and, after being done once or twice, the pain is so much relieved that more freedom can be used. "It is wonderful (he says) how much more of the mercurial unguent may be made to pass into the general mass of fluids in this way, than when frictions on the thighs are used." With regard to the length to which these frictions may be carried, he thinks they should be continued some time after marks of salivation have shown themselves. It is necessary that the patient be kept in a temperature considerably elevated, and carefully guarded against cold currents of air. As to the mercury, it is evident, he says, that it acts, first, in modifying the nature of the fluids, and, by consequence, the state of the inflamed surfaces. He draws the following conclusions:

1st. That puerperal peritonitis, when well established, and left to itself, is almost always fatal. 2d. That it is still to be proved that, in this state, sanguineous depletions are a sufficient remedy. 3d. That it is incontestable, according to the observations of Hamilton, Gordon, and M. Vandenzende, that, by the aid of calomel in large doses, many women affected with this disease have been saved. 4th. That mercurial frictions made on the abdomen, frequently repeated, promise great success, and deserve to attract the attention of practitioners. 5th. That, by the aid of these, patients, who have had one foot in the grave, have been saved; and that, therefore, they ought to be used in any stage of the disease, however late. 6th. That they can be continued with great safety till the mouth shows itself to be affected. 7th. That it will be useful to add to their use that of baths, calomel, and an elevated temperature. 8th. That the facts observed by him, although not sufficiently numerous to produce conviction, yet may encourage practitioners to renew the trials. 9th. In fine, that mercurial preparations have the property of sometimes curing puerperal peritonitis, when well marked, but that, to discover the best mode of administering them, we must wait for farther experience.

On the Impropriety of applying Ice to the Head in Cerebral Inflammations.—At a late meeting of the Academie Royale de Medecine, M. Costa read a Memoir on the Treatment of Cerebral Inflammations, in which he states his dissent to the employment of ice to the head in cases of Arachnitis and Encephalitis. "Would we found this treatment (says he,) on the idea that the inflammation of organs contained within the brain is of a peculiar nature? But MM. Tomasin and Broussais have sufficiently proved that inflammation, wherever situated, and whatsoever its causes, is always the same. Now, then, if cerebral inflammations are the same as phlegmasiæ of other organs, why treat them differently from the others? Can we expect to oppose the flow of blood by the intensity of the cold?" The author thinks it produces quite a contrary effect, in constringing the vessels of the scalp, and forcing the blood in these vessels to flow back on the brain. Discarding the application of ice and blisters on the head, he proposes another mode of treatment.

In idiopathic cerebral inflammations, he shaves the head, and covers it, in the course of the sagittal suture, and chiefly at its posterior extremity, with a great number of leeches; he then covers it with emollient poultices, which he renews as necessary; and also uses some general bleedings, if required. If, on the contrary, the inflammation is sympathetic with gastro-enteritis, which is commonly the case, particularly with children, he directs his attention to the state of the intestinal tube, unless the encephalitis greatly predominates, and then he treats it as above.

In concluding his Memoir, he gives these reasons why he prefers the sinciput for the application of the leeches:—The first is, that inflammation of the arachnoid, or encephalitis, usually has its seat in the anterior regions of these organs. 2dly. In applying leeches to the sinciput, he disgorges more directly the inflamed parts, as he acts on the superior longitudinal sinus, or rather on the veins which discharge themselves into it. 3dly. Because there is a sympathy between the skin which covers the splanchnic cavities and this part.

SURGERY.

Method of avoiding Amputation of the Penis in Cases of Cancer.—In the Report of the Clinique de la Pitié, by M. E. Margot, an account is given of a method that M. Lisfranc follows, to discover to what degree of depth cancer of the penis extends, and whether the diseased parts may not be completely removed without amputating the penis.

M. L., in his clinical lecture, in showing a patient with cancer of the penis, took the opportunity of saying that he would put in execution an idea that he had long entertained, and which had been suggested to him from minute examination of some amputated cancerous penes. "I have seen (says he,) penes enlarged to twice their natural size, and with all the symptoms of occult or ulcerated cancer: every thing announced that this frightful disease completely occupied the organ. They have been removed, and, on minute examination, the disease has been seen to be confined to the corpora cavernosa." How are we to know that such is the case? There is but one way: it consists in making, on the dorsum of the penis, parallel to the axis of that organ, an incision, which, beginning at the anterior part of the cancerous point, shall be continued to the posterior. The bistoury must be used with much caution and slowness, and, as the incision goes on, the parts must be cleaned with a sponge; and, the extent of the disease being discovered, a careful dissection of the diseased parts may save the penis. The only inconvenience resulting from this operation is the prolongation of the sufferings of the patient.—M. Lisfranc has twice put in practice this operation, and each time saved the member. (*Rev. Med.*)

MISCELLANEOUS.

Means of Restoring those apparently Drowned.—A book, intitled "Essai Historique et Therapeutique sur les Asphyxes," has lately been published by M. Plisson, in which he suggests that insufflation by the mouth of another person is better than by any machine. He says, the air expired still contains eighteen per cent. of oxygen; it is warm, and impregnated with the pulmonary perspiration which accompanies it into the lungs, softening and rendering the air less irritating than the colder surrounding atmosphere. The person who is to insufflate ought previously to make two or three deep expirations and inspirations, so as completely to renew the air contained in the lungs, before introducing it into the lung of the drowned person.—Next to insufflation, M. Plisson considers the introduction of tobacco smoke, in glyster, as the most efficacious means to be employed. He says, "But of all glysters, that with the fumes of tobacco has been most praised, and, what is better than all reasoning, is this, that a great number of persons who have been drowned have owed their restoration to this alone, aided by slight frictions, insignificant in themselves. I think, then, (he says,) that those who blame this measure act very wrong; and perhaps they would not so hastily have condemned it, if, laying aside all theory, they had confined themselves to practical observations."

It appears that, of 934 persons apparently drowned, who had been succoured at Paris, from 1772 to 1778, 830 were restored; and it was during this period that, by the care of M. Pia, means for giving these glysters (*boites fumigatoires*) were established: it is well known that this great philanthropist, in the instructions which he communicated, always recommended their use as the principal restorative means.

INTELLIGENCE.

MONTHLY REPORT OF PREVALENT DISEASES.

In our last Report, we alluded to the great prevalence of pulmonary complaints: the acute attacks have become less frequent within the last fortnight, but many of the chronic affections continue their course without any disposition to yield. Chronic Bronchitis, especially in elderly persons, has been severe, and in several instances has given rise to dropsical effusions, of which, from this and other causes, we have met with many cases during the last two months. While the vicissitudes of the weather have produced these diseases in the aged or debilitated, those of more robust habit have been affected with Biliary Derangements and Diarrhœa, to a considerable extent: at least, were we to select any one set of complaints out of the common routine of winter cough and rheumatism, we would place these first on the list, as having been most prevalent during the period comprehended in our Report. Among the biliary cases, several have assumed the form of Jaundice; and one of these patients, the first of many to whom we have put the question, appears to see objects of a yellow tint. Most patients with jaundice will assert that white paper is yellow; because they think they ought to do so; but the young woman alluded to has invariably called every blue object green, which probably depends upon her seeing them through a yellow medium.

March 26th.

Reconciliation between Mr. J. H. Green *and* Mr. Bransby Cooper.

As various papers relative to the unfortunate differences between these gentlemen have been laid before the public, we are happy in being able to inform our readers that a reconciliation has taken place, as will appear from the following document:—

"We, the undersigned, being anxious to reconcile the unfortunate misunderstanding existing between Mr. J. H. Green and Mr. Bransby B. Cooper, have, with the permission of these gentlemen, enquired into its origin, and have great pleasure in making the following communication to the profession.

"Upon a calm review of the occurrences which took place during the controversy respecting the election of an anatomical teacher at St. Thomas's Hospital, and in consequence of having learned that he had been misled by statements which he conceived at the time to be authentic, Mr. Bransby Cooper has expressed his conviction that Mr. Green's conduct was, throughout that controversy, guided by strict principles of honour and integrity, and has therefore acknowledged his regret that a misconception of Mr. Green's motives should have induced him to make any offensive animadversions on that gentleman's character.

"In consequence of this explanation on the part of Mr. Bransby B. Cooper, a mutual reconciliation has taken place, equally to the honour and satisfaction of both parties.

	B. C. BRODIE,	JOHN MORGAN,
(Signed)	BENJAMIN TRAVERS,	T. CALLAWAY.
	THOMAS ROSE,	

London; 13th March, 1827."

Dissection of one of the Cases of Aneurism in which the Carotid Artery was supposed to have been tied beyond the Tumor.

Our readers are probably aware that it was proposed by Dessault to tie the artery, in certain cases of aneurism, beyond the tumor, and that this operation was actually performed by Deschamps and by Sir A. Cooper; but, proving unsuccessful with them, never became generally adopted. Allusion is made in the present Number of the Journal to Mr. Wardrop's attempt to revive this method of operating; and we therefore think it right to make our readers acquainted with the state of parts, as discovered on the post-mortem examination of one of the recent cases.

The patient alluded to died last week, and the body was examined on the 23d, when it was found that *the carotid artery was pervious and undisturbed, presenting one continuous tube throughout, there being no unusual appearance, and no aneurism.* The heart was affected with Hypertrophy.

Mr. Travers, with reference to the alledged success of this method, remarks (page 331,) that it will be of much importance "*if borne out by similar results;*" and we have given the above details because it is obviously of great importance that surgeons should be able to form a true estimate of the value of any proposed method of treatment as soon as possible, that it may either be rejected or adopted, according to circumstances.

We are quite aware that mistakes will sometimes happen, even in the hands of skilful surgeons; and it is this consideration which has induced us to withhold *numerous other instances of unfortunate operations,* which have been transmitted to us for the purpose of publication, because they have not, like the present case, been connected with any important practical question.

March 26th.

Two Cases of Poisoning by Belladonna. By Mr. Smith, Surgeon, of Forres, N. B.

Nov. 5—At five P.M. I was called to see two of Mr. M.'s children, both boys, the one four, and the other two years of age. They had eaten, together with another child, of the berries of the Atropha Belladonna, from a bush in Mr. M.'s garden, to which they got access through a gap in the railing. It appears to have been between one and two o'clock that they were in the garden; for soon after two the elder M. went to school, where the symptoms to be detailed made their appearance. When taken up to his lesson, he did not speak, but laughed immoderately, and grasped at imaginary objects: he had, previous to this, complained of pain in his head. He was now sent home, where the laughing continued, and he was as talkative as he had before been silent, but he was altogether incoherent; added to this, he was in constant motion, running round and round the room. This wild conduct attracted the particular attention of his mother, who, observing a red stain on his face, suspected what had taken place. I found him laughing and talking alternately; he was now kept on the knee, but the extremities were in violent and almost constant action; the eyes fixed, and the pupil fully dilated, and insensible to the light of a candle. A scruple of Sulph. Zinc was immediately procured, and given at twice in the course of a few minutes; and, as soon as he began to vomit, the fauces and gullet were freely tickled with a feather. By these means a good deal of reddish matter, in which were many pieces of the berries, was brought up.

It was at this time that our attention (Mr. Adams, my partner, had arrived,) was called to the younger boy. In him the symptoms were the same, and now fully as violent. About half a scruple of Sulphate of Zinc was given to him, and the fauces and gullet treated in the same way. This caused him to vomit great quantities of porridge (which he had taken for dinner,) and one or two husks of the berries. To induce still more vomiting, a solution of Tart. Emetic was given to each. To effect this, and the giving of the other medicines, &c., as the jaws were firmly locked, it was necessary to separate them, and keep them so by the handle of a penknife. Besides the locking of the jaws, there was difficulty in swallowing, for but a very little milk was got down, although frequently administered. The titillation was continued at intervals, until both had evacuated a good deal of reddish looking matters; the colour being evidently caused by the juice of the berries. After some little time, when nothing more was coming up, about an ounce of Castor-oil was administered to each. Notwithstanding this treatment, the symptoms had in the mean time become worse. The muscular motions were stronger and incessant; breathing noisy, and with a croupy sound, and occasional cough; faces swollen and red; incoherent talking continuing. Soon after taking the oil, enemas were administered, and repeated about every two hours. They had also small quantities of vinegar and water (half and half,) given them frequently. It was now six o'clock. The elder boy's breathing was loud and stertorous, and the face much swollen; but the muscular motions were less violent and frequent; the skin cold; pulse barely perceptible from the beginning, now not felt in the radial artery: he was therefore put into a warm bath, and after a few minutes, while there, the jugular vein was opened, and some five or six ounces of blood taken away. This relieved him considerably. He was put into a blanket, and kept warm. There was now a disposition in both to sleep in the intervals of the muscular movements, which returned after short intervals of quiet; but it was not till towards the morning of the 6th, that we permitted them to take short sleeps. While not asleep, they were still incoherent. While awake, they had some strong coffee given them, or occasionally the vinegar and water.

6th.—About three o'clock this morning, more Castor-oil was ordered, but little got down. At nine, the elder boy had much croupy cough, which has caused, oftener than once, a little bleeding from the neck; locking of jaws less in both; other symptoms much the same. Coffee and enemas to be continued, and four grains of Calomel given to each. Shortly after this, the infant voided by stool about twenty skins of the berries, and, in the course of the forenoon, he had several feculent stools.

At two P.M. I found this poor little fellow cold, and deadly pale, with hardly any pulse. He was immediately put into a warm bath, and the chest rubbed with flour of mustard; an assafœtida enema was also thrown up. He gradually became warm, and the pulse more distinct. He was again in a state of collapse at six; when the same means were used, and he took small quantities of warm punch and chicken-broth. When taken from the water, he was wrapped in blankets, laid at the fireside, and bottles with hot water placed round him. At half-past seven, he was much revived, and asked for a drink; he also ate a spoonful or two of panado; preferred cold water for drink; still purged; stools watery. Some erithema, which was on him in the morning, has now disappeared.

At half-past four, the elder boy got another ounce of Castor-oil; he has been in a natural sleep for some time; has still slight convulsive motions; pulse very frequent, but distinct. Allowed plenty of tea, broth, or any liquid he likes; and to have a soap enema when he awakes.

7th.—Were both restless in the early part of the night, but have slept a good deal since morning; towards which, they began to distinguish objects, and to speak and act rationally. Previous to this they were blind, for the candle held close to the eye produced no effect on it, nor any appearance of their being aware of its presence. Pupils are still much dilated, and conjunctivæ red, although less so than they were. Pulses distinct, and in the eldest boy soft, and not very frequent. Freely purged, the infant complaining of some pain in the belly, which is not increased by pressure. Thirst great in both. The broth, &c. to be continued, and another enema administered to the elder.

From this time they continued to mend, and after a little time they had no complaint. The noisy, croupy cough continued longest; and, when the elder boy has a cold, the cough is still (at a distance of six years) of the same nature.

The boy mentioned as having partaken with the M.'s of the poison, was treated nearly in the same way by another practitioner, and with a like result.

Forres, Feb. 1827.

Case of Extra Uterine Fœtus. *By* R. MACKIE, Surgeon.

On the 9th October, 1826, a negress, about forty years of age, was brought into the Lying-in Hospital of Plantation, Richmond Hill, Leguan, to be delivered of her twelfth child. Next day, the midwife, thinking the labour rather tedious, sent for the medical practitioner of the estate, who, on examination per vaginam, concluded the patient not to be in labour. She complained of slight pain across the umbilical region, with numbness of the lower extremities. The vagina was not dilated beyond its natural size. Bowels empty, and urine passed freely; no constitutional irritation.

On the morning of the 10th, the patient was much in the same state as when admitted. The feeling of numbness in the lower extremities was changed to that of acute pain; the head of the child could be felt resting on the pubis, apparently covered by a thin membrane; the os tincæ could not be distinguished. Bowels regular; pulse natural.

In the evening, the symptoms continued much the same. No uterine pains; pulse still good. The patient was perfectly collected; partook of light food, and walked about the room, conversed cheerfully with her attendants, and was seemingly under no apprehension as to the result. It was thought necessary to administer a dose of Castor-oil, which operated freely about five o'clock. Soon after, in consequence of pain in the hypogastric region, a catheter was introduced into the bladder, and a small quantity of urine drawn off, which produced immediate relief. In introducing the catheter, it was found necessary to raise the head of the fœtus from the pubis.

During this time nothing had occurred to cause a supposition that any thing untoward was likely to take place. The case was considered as one of protracted labour; and, as the patient had had merely a few trivial pains, and was in full possession of her health, mental as well as bodily, it was hoped that, on the accession of true labour-pains, the child would be soon expelled.

At about seven in the evening of this day, while reclining on her back in a half-sitting posture, her extremities suddenly became cold, and, without making any complaint, or showing any symptom of being in pain, she, with one slight convulsion, expired.

On ascertaining the death of the mother, an incision was immediately made, about six inches in length, from the umbilicus downwards along the linea alba. On cutting through the peritoneum, a body presented in close contact therewith, which, on enlarging the opening, was protruded with considerable force, and proved to be a full-grown male child, with its funis and placenta. The child was perfect in every point, and was rather a large one. It was not enclosed in any sac, nor could any connexion be discovered between it and any part of the abdominal viscera. From the placenta being instantly expelled along with the fœtus, its attachment was not seen; nor did a subsequent examination lead to any discovery.

The uterus was found in its natural position, enlarged to about the size it attains in the latter end of the third month of pregnancy; the os tincæ dilated sufficiently to admit two fingers; its external surface presented no appearance of disease, nor was there the smallest sign of rupture ever having taken place in this viscus. The bladder was found empty; the placenta was flatter than usual. The position of the fœtus was with the breech to the navel of the mother, and the back extending along the linea alba; the head presenting at the superior aperture of the pelvis, pressing upon the anterior superior part of the vagina, and forcing backwards the os tincæ upon the sacrum. No further examination could be made. The uterus was extirpated at its connexion with the vagina, and is in the possession of the writer in the same state as when removed, together with the fœtus and placenta.

It should have been observed, that this woman, during pregnancy, suffered no sickness more than had been usual.

Demerary; 12th Oct. 1826.

An Account of an improved Stomach Pump, or Injecting Syringe, and of an Amputating Saw, invented by Francis Fox, jun. M.D. House-Surgeon to the Derbyshire General Infirmary.

The instrument is constructed in the following manner:—The piston, with a square rod sliding through a square collar at the lid of the syringe, moves in a common cylinder, as in other syringes. The bottom of the syringe is composed of moderately thick brass, having two holes in it, through which the matter to be pumped passes: this circular brass end is turned on the outside at the end, and has another circular piece of brass, with two similar-sized holes in it; these two holes terminate in two projecting short pipes, to which the stomach tube and the basin tube are fixed. The touching surfaces of these two circular pieces of brass are ground together so as to fit air-tight, and to move smoothly on each other. To the lower or outer of these pieces, at its edge, is fixed a cylinder, which will fit on the outside of the barrel of the syringe without touching the same. This outer cylinder extends half way up the barrel of the syringe, and is grasped by the left hand when the instrument is in use, (this may be called the hand cylinder;) the right hand holds the handle of the piston-rod. The holes through the inner piece of brass are on each side the centre, but rather more than one diameter of one of the holes out of the line of the diameter of the brass; the two holes through the outer piece of brass are exactly in the line of its diameter, one on each side of its centre. The ground surface of the outer brass is kept in close contact with that of the inner brass, by a milled nut at the end; and there is a simple stop to prevent these two ground surfaces from revolving too far; so that when the stop acts in one direction, the hole on one side the centre is open, and when the stop acts in the other direction, the opposite hole is open, and so on alternately.

When the syringe is held in the proper position for use, that is nearly in the horizontal direction, the words STOMACH PIPE and BASIN PIPE are to be seen on the upper surface of the hand cylinder, and the word OPEN on the barrel of the syringe: thus, grasping the hand cylinder in the left hand, and the handle of the piston-rod in the right hand, by means of the square piston-rod the barrel of the syringe is turned at pleasure by the right hand, either one way or the other, so as to bring the words STOMACH PIPE in a line with the word OPEN, or the words BASIN PIPE and the word OPEN in a line with one another, indicating that the communication is open either with the stomach or with the basin; and only a very slight rotation of the right hand is required to effect this alternate change.

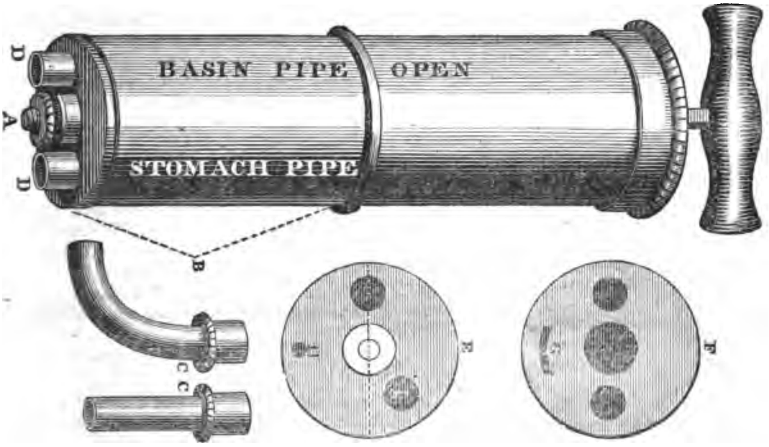
The two short tubes to which the stomach and the basin pipe are fixed, project straight out at the end of the syringe, having no angles or turns in them; the full bore of each is open alternately, and the other shut. When the milled nut is taken off the end, the hand cylinder, with the outer piece of brass, draws off the barrel, when both the ground surfaces are exposed to view, and can be cleaned in a moment if required, and as easily refixed for use.

The instrument is simple in construction, and has not any part which is liable to be out of order or to harbour dirt. The stomach and basin pipe are so fitted that the one cannot be put on to the place intended for the other, and the hand cylinder can only be put on in the proper way, in consequence of the stops; so that the pipes, and the words relating to them, are sure to be properly adjusted when the instrument is prepared for use. The syringe is perfectly uniform in its external appearance, being a straight barrel, with two tubes, half an inch long, projecting from its end; and may, in the strict sense of the word, be said to act without either valves or stop-cocks. The hands never require to be moved from their hold, and the course of the fluid acted upon is reversed at any moment, and with perfect ease, by a moderate turn of the right hand, and the words engraved on the syringe telling which pipe is open. Supposing it is intended to inject the stomach, the piston is to be drawn out, with the words BASIN PIPE and the word OPEN in a line; the syringe being full, the words STOMACH PIPE are to be opposite the word OPEN, and the piston forced into the barrel, when the fluid will pass into the stomach. The syringe can then be filled again from the basin, as just described, and so on. Or, by reversing the order of action,—viz. drawing out the piston when the words STOMACH PIPE, OPEN, are in a line,—the fluid will be drawn from the stomach. The course of the fluid is changed at any moment, by reversing the direction of the piston rod,—viz. by forcing it in or drawing it out. This will be found a sufficient description of the principle of construction, and method of using the instrument; and, by reference to the accompanying engraving, a further elucidation will be obtained.

In a paper, which was published in the London Medical and Physical Journal about two years ago, on the subject of the Stomach Pump, or Poison Syringe, I expressed the reasons why such instruments on the valve principle were all to be condemned: first, because the direction of the fluid acted upon cannot be reversed without removing and changing the position of the pipes, which reverse is continually necessary in extracting the contents of the stomach, in consequence of the end of the stomach-pipe becoming often stopped up, by the lumpy and fibrous matter which the stomach so constantly contains. Secondly, because the valves must in a degree obstruct the passage of a thick, lumpy, and fibrous pulp, and even be occasionally propped open by the same. And, thirdly, because valves may be out of order, and rectifying them requires considerable attention. But I repeat, by far the most important and insurmountable objection to valves is, that the course of the fluid cannot be alternated with expedition, which every practical man must know to be absolutely essential during the extraction of the contents of the stomach. I stated in the paper here alluded to, that valve syringes were elegant instruments, where the passage of clear fluids only was required. Under this conviction, founded upon experience in the use of the stomach pump, I recommended one with a double stop-cock, moved by the forefinger of the left hand, whilst grasping the syringe, so that the pipes were alternately opened and shut by each movement of the finger. This instrument has been publicly noticed by a writer, who stated *that valves were the only things to be recommended in the construction of a stomach pump.* These assertions, however, are not to be taken on the authority of the maker of the instrument, but experience and observation alone must decide.

Syringes on the stop-cock plan afford free passage to thick and fibrous pulp; the course of the fluid is instantly changed by reversing the direction of the piston; and, had the mode of alternately opening the cocks been sufficiently easy and simple to the operator, at the same time there being no complication in construction, the instrument would have been perfect: but, as I have not seen all these points satisfactorily accomplished, I have turned my attention to the subject, and take this opportunity of submitting my improved syringe to the opinion of the medical profession, and only request that it shall have a fair and impartial trial and examination, knowing that its fate will then depend upon its merits or demerits. This syringe, from the freeness of its passages, and from there being no part in it which can harbour dirt, is recommended for the injection of large anatomical subjects; as a syringefull of injection could be repeatedly forced in without removing it from the vessel tube, and hence all breaks in the injection would be avoided, and the operation expedited. I shall now only add, that the instrument is applicable for all purposes where rather a large syringe is convenient.

The syringe is recommended to be eight inches and a half long, and the barrel two inches in diameter; the other parts larger than the drawing, in the same proportion.



Description of the Engraving.—A, The milled nut which keeps the hand cylinder B in its situation on the barrel of the syringe.

C, C, The two rockets, with a portion of the elastic stomach pipe attached to one, and a portion of the basin pipe affixed to the other: these rockets fit on to the projecting tubes D, D.

E, F, represent the surfaces which are ground together of the two circular pieces of brass at the bottom of the syringe, in which the position of the holes is displayed. The centre circle in E represents the pivot which moves in the hole shown in the centre of F.

G, H, denote the groove and pin forming the stop. These two circular pieces of brass are represented as detached from the ends of the cylinders, to simplify the engraving.

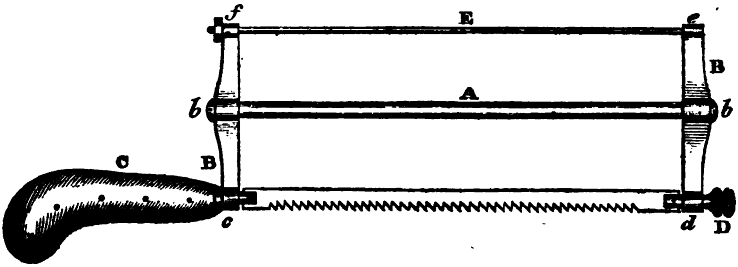
Description of the Saw.

The principle of this saw is the same as the one used by joiners and cabinet makers for sawing circular and curved pieces of wood, where the end bars and the middle rod are made of wood, and the saw-blade is stretched by twisting a double string, by a small wooden lever placed between the two strings. It is not necessary to describe this principle more accurately, as any one, by reference to the joiner's saw in question, will understand it immediately.

The objects aimed at in the construction of this amputating saw, have been to render the instrument as light as possible, and at the same time to ensure the powerful extension of the saw-blade; and also that the stretching part of the saw shall admit of turning to any desired angle with the plane of the blade, so that the saw-blade may be applied to the bone, *quite close up to the muscles*, without the fleshy parts held back by the retractors coming in contact with the stretching part (or back of the saw). This circumstance renders the saw particularly convenient in amputations with the flap; as, in muscular subjects, the flap is often found to be in the way of the back parts of the broad-bladed saw in common use.

The objection to the bow amputating saw, is that the bow requires to be so thick to secure the powerful stretching of the blade, that the weight of the instrument is very considerable, and this weight, when entirely rested on the bone, frequently causes the teeth to take so much hold as to fasten the saw during the operation. The bow amputating saw at this Infirmary weighs one pound; the one on the construction here described, weighs only half a pound.

These observations, and the amputating saw here recommended to the consideration of the profession, are the result of the frequent opportunities which I have had, in my official capacity, of witnessing amputations of various descriptions. The instrument is introduced before the public with all due deference to the opinions of the members of the profession, with a full conviction that these suggestions will lead to improvement, although the saw here recommended may be thought to require some modifications in construction.



Observations on the Engraving, (which represents the relative size of every part.) —A, Is an iron tube, to render it light, and to ensure its being strong for its weight.

B, B, are two steel plates, or bars, into which the tube A fits, and is secured by two screws at *b, b*.

C, the wooden or ivory handle of the saw, with a steel shank, which passes through, and turns very tight in the end of the steel plate at *c*.

D, a milled double nut, which turns very tight in the end of the plate at *d*. This double nut is constructed so as to admit of the accurate adjustment of the length of the saw-blade, that the two steel plates B, B, shall be square with the tube A, when the blade is on the *full stretch*. This will be easily comprehended by examining an instrument constructed according to this principle.—The saw-blade is pinned into a slit in the handle-shank and into the nut-shank, so as to admit of being turned to any desired angle, by means of the handle and double-milled nut.

E, The stretching rod, made of very thin steel wire, is fast in the plate at *e*, passes through a hole at *f*, and has a small nut tapped on to its end; which nut is screwed up by a small wrench, or key, so as to put the blade on *full stretch*.

The thinner the blade is, the better.

Annual Report of the National Vaccine Board.

To the Right Honourable Robert Peel, Secretary of State for the Home Department.

Sir,—We continue to use all possible diligence in extending the knowledge of the best process for effectual vaccination, and to supply the means, as well as to suggest the mode, of accomplishing this object.

From the quantity of vaccine lymph distributed since our last Report, and from the accounts of our correspondents, we are led to presume that this practice is becoming daily more general; and this inference is still further confirmed by the fact, that, within the last twelve months, only 503 deaths have occurred from small-pox within the Bills of Mortality; whereas, in the preceding year, 1299 persons are recorded as having fallen victims to that loathsome disease. The whole of this difference ought not, perhaps, in candour, to be attributed to the influence of vaccination; for the small-pox, during the year 1825, assumed a peculiarly malignant character; and there were more instances of that distemper occurring *twice* in the same individual, than had ever been reported to us before. But when we reflect that, before the introduction of vaccination, the average number of deaths from small-pox, within the Bills of Mortality, was annually about 4000, no stronger argument can reasonably be demanded in favour of the value of this important discovery. Nor can any more striking proof be given of the paternal care of government to protect the people at home and abroad from this destructive disease, than the establishment and maintenance of this Board.

We have the honour to be, Sir, your faithful servants,

HENRY HALFORD, *President of R. Coll. Physicians.*
WILLIAM LAMBE, } *Censors of the Royal College of*
J. COPE, } *Physicians.*
JOHN ABERNETHY, *President of R. Coll. Surgeons.*
ASTLEY COOPER, *Vice-President of R. Coll. Surgeons.*
CLEMENT HUE, M.D. *Registrar.*

National Vaccine Establishment; 17th February, 1827.

Admission of the Licentiates to the Hunterian Museum.

February 20th, 1827.

Sir,—I am desired to inform you, that, in consequence of a correspondence which has taken place between the President of the College of Physicians and the President of the College of Surgeons, the Board of Curators have adopted the following resolution:

"That the Licentiates of the College of Physicians shall hereafter be admitted to the Museum of the College of Surgeons, upon all days of public exhibition, without further ceremony than that of inscribing their names in the visitors' book."

I am, Sir, your humble servant,
WM. MACMICHAEL, *Registrar.*

By order of the Royal College of Physicians.

MONTHLY LIST OF MEDICAL BOOKS.

[*No books can be entered on this List except those sent to us for the purpose; as, in the list hitherto transmitted, the names of works have frequently been given as published, which have not appeared for weeks, or even months, after.*]

A Clinical Lecture delivered to the Students of Surgery in the Royal Infirmary of Edinburgh, at the conclusion of the Winter Course for 1826-27. Edinburgh, February, 1827.

Psychological Speculations. Essay I. The Theological Department of Psychology, concerning Time, Space, Sense, &c. With a General Syllabus of Psychology. By the Spirit of the Blue Mountains.

Reply to the "Additional Strictures" contained in the first Number of the Quarterly Medical Review, on the Principles of Dental Surgery, exhibiting a New Method of Treating the Diseases of the Teeth and Gums, especially calculated to promote their Health and Beauty, &c. By LEONARD KOECKER, Surgeon-Dentist, Doctor in Medicine and Surgery, &c. &c. &c.

Medical Botany, No. III. Containing Hyoscyamus Niger, Phellandrum Aquaticum, Helleborus Niger, Lactuca Virora.—The Plates are beautifully executed.

A Series of Engravings, intended to illustrate the Structure of the Brain and Spinal Chord in Man. By HERBERT MAYO, Surgeon, and Lecturer on Anatomy.

⁂ We can vouch for the accuracy of these as representations of the parts, having compared several of them with the preparations from which they have been taken. As engravings, they are beautiful specimens of the art; and the whole is highly creditable to Mr. Mayo.

METEOROLOGICAL JOURNAL,

From February 20th, to March 20th, 1827.

By Messrs. HARRIS and Co. Mathematical Instrument Makers, 50, High Holborn.

February	Rain gauge.	Moon.	Thermom.			Barometer.		De Luc's Hygrom.		Winds.		Atmospheric Variations.		
			9 A.M.	MAX.	MIN.	9 A.M.	10 P.M.	9 A.M.	10 P.M.	9 A.M.	10 P.M.	9 *a.m.*	2 *p.m.*	10 *p.m.*
20			28	32	32	29.56	29.54	82	80	ENE	NE	Fair	Fair	Cloudy
21			34	38	32	29.53	29.61	89	87	NE	ENE	Cloudy	—	Fair
22			35	39	25	29.75	29.87	84	78	N	NNW	Fair	—	Cloudy
23			32	38	29	29.93	29.89	74	72	W	SW	—	—	Foggy
24			35	40	26	29.84	29.92	75	76	NE	ESE	Foggy	—	—
25		●	34	40	34	30.04	29.95	79	77	SE	SSE	—	Fine	—
26			38	50	47	29.73	29.65	92	85	S	WSW	Rain	Fair	Cloudy
27			50	54	36	29.39	29.57	94	92	WSW	W	Cloudy	Rain	—
28			37	49	49	29.56	29.31	98	98	ESE	SW	Rain	—	Rain
Mar.														
1			50	44	44	29.23	29.34	82	97	SW v.	SW	Cloudy	—	—
2	.16		47	48	39	29.17	29.42	97	87	SSW	SSW	Rain	—	Fair
3			45	48	43	29.35	29.03	90	92	SW	ESE	Cloudy	Cloudy	Cloudy
4			46	49	33	28.71	29.20	93	83	SSW	SW v.	—	—	—
5		☽	35	45	44	29.62	29.21	83	92	WSW	SW v.	Fair	—	—
6	.24		49	51	39	28 97	28.98	91	81	SW	N to S	Rain	Rain	Rain
7			40	51	43	29.43	28.94	87	95	SW	S	Overca.	Cloudy	—
8			46	51	34	28.79	29.10	84	78	SW	WNW	—	—	—
9			37	41	32	29.30	29.35	80	83	NW	ENE	Fair	Fair	Cloudy
10			41	45	37	29.66	29.69	78	78	ESE	SSE	—	—	—
11			50	56	47	29.44	29.40	87	95	SW	SW v.	Cloudy	—	—
12			49	55	46	29.56	29.81	88	87	W	SW	Fair	Fine	—
13	.8	○	50	56	44	29.74	29.62	88	95	NW	WSW	—	Fair	Rain
14			48	51	43	29.65	29.84	77	82	NW	W	—	—	Cloudy
15			45	48	35	29.50	29.71	87	78	W	WNW	Sm. Ra.	—	Fine
16			40	48	43	30.01	29.76	80	92	W	SW	Fair	—	Rain
17			47	47	34	29.25	29.65	85	83	WNW	WNW	—	—	Fair
18			40	44	32	29.92	30.12	75	77	NW	NNE	—	—	—
19			40	45	43	30.20	30.19	77	84	W	SW	—	—	Cloudy

NOTICES.

Communications have been received from Dr. Burder, Mr. Cox, Dr. Gregory, Dr. Webster, Mr. Boyle, Mr. Russell, Mr. Kingsley, Mr. Wallace, Dr. Mac Andrew, *and* Mr. Hamilton.

Mr. T.'s *Case of Retenitis does not appear to us of sufficient interest for publication.*

We regret we cannot insert the Communication with which we have been favoured by Mr. K——y. *The subject is not devoid of interest, but the cases are related much too diffusely for publication.*

The present Number had unfortunately been made up before Mr. Wallace's *letter arrived. We shall give it in our next.*

N.B.—*We have recently received several pamphlets, and other large packets, by post. We must suggest to Correspondents, that we cannot receive any Communications, the carriage of which is not paid.*

THE LONDON
Medical and Physical Journal.

No. 339, VOL. LVII.] MAY, 1827. [No. 11, *New Series*.

For many fortunate discoveries in medicine, and for the detection of numerous errors, the world is indebted to the rapid circulation of Monthly Journals; and there never existed any work, to which the Faculty, in Europe and America, were under deeper obligations, than to the Medical and Physical Journal of London, now forming a long, but an invaluable, series.—RUSH.

ORIGINAL PAPERS,
AND
CASES OBTAINED FROM PUBLIC INSTITUTIONS AND OTHER AUTHENTIC SOURCES.

PARAPLEGIA.

An Inquiry into the alleged Cerebral Origin of certain Cases of Paraplegia. By THOMAS HARRISON BURDER, M.D. one of the Presidents of the Westminster Medical Society; formerly President of the Medical Society of Edinburgh; and late Physician to the WESTMINSTER GENERAL DISPENSARY.

DURING the last ten years, the subject of Paraplegia has attracted considerable attention. Prior to the appearance of the valuable contributions to the pathology of the brain and spinal chord, in the Edinburgh Medical and Surgical Journal for the years 1818-19, by my learned friend Dr. ABERCROMBIE, and the interesting paper on Paraplegia by the late venerated Dr. BAILLIE, in the sixth volume of the Transactions of the London College of Physicians, paraplegia was generally regarded as dependent exclusively on a morbid condition of the spinal marrow, or its investing membranes. The name, indeed, had been employed by the ancient physicians to express very different states of disease; and it was not until a comparatively late period that the term was restricted to its present acceptation.* There is still, however, considerable uncertainty in the extent of its application; some writers confining the term to a paralytic state of the lower half of the body, while others employ it to designate transverse palsy, at whatever point below the neck such paralytic affection commences. In this latter and more extended sense, I shall consider the disease in the present paper.

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* See Dr. COOKE's discriminating remarks on the opinions of HIPPOCRATES, ARETÆUS, and GALEN, with reference to Paraplegia, in his Treatise on Nervous Diseases.

It may be proper to mention that the following remarks were offered as introductory to a discussion on this subject, in the Westminster Medical Society, at the close of the last year. Particular allusion was necessarily made to the influential opinion of Dr. BAILLIE. In the course of the debate, a distinguished member of the Society, Dr. GREGORY, excited a powerful interest by bringing forward an original paper on the subject, confirmatory of the opinions Dr. Baillie had before published, and which that lamented physician had entrusted to Dr. Gregory's care, with an express injunction to produce it, should those opinions ever be particularly controverted. This interesting document Dr. Gregory has obligingly confided to my custody, while prosecuting the present investigation, authorising me to make such use of it as may appear best calculated to subserve the cause of truth,—that noble cause to which Dr. Gregory's inestimable patron had dedicated his active and honourable life.

As the prevailing opinion relative to the cerebral origin of paraplegia may be principally traced to the writings of Drs. Baillie and Abercrombie, I propose first to present a short analysis of the cases from which those able pathologists appear chiefly to have drawn their inferences; adding a few remarks on what appears to me to be the inconclusive nature of the evidence thus furnished. It will then be proper to introduce the posthumous paper of Dr. Baillie before alluded to, with an inquiry how far the additional illustrations thus obtained serve to establish the author's favourite opinion. I shall afterwards advert, cursorily, to the sentiments of a few other writers on the same subject; and, finally, submit to the profession such general inferences from the facts recorded, and from those which have fallen within my own observation, as may appear to be fairly deducible from our present knowledge of the subject.

I. Dr. ABERCROMBIE's *Cases.*

These interesting examples appeared in the Edinburgh Medical and Surgical Journal for October 1819, and prior to the publication of the volume which contained Dr. Baillie's view of the same subject. They were not adduced, I apprehend, for the purpose of establishing the cerebral origin of paraplegia, but merely formed part of a most valuable series of illustrations on the morbid anatomy of the brain and spinal marrow. They have, however, materially contributed to strengthen that opinion, having been quoted in our late systematic works as admitted examples of cerebral paraplegia. The following cases form the sixth class of Dr. Abercrombie's arrangement of the organic diseases of the brain, and are placed under the general title of "Symptoms in the Head, with Paraplegia." The first and second cases I shall give in the Doctor's own words.

CASE I.—"A boy, aged seven, (for whose case I am indebted to Dr. [the late Professor] Gregory,) in the beginning of the year 1811, received a violent injury of his forehead and nose by a fall. From that time he had headache. After two or three months he became near-sighted. Soon after, his sight became indistinct; and, after four or five months more, this was followed by blindness. About this time he began to be epileptic, and affected with weakness of the lower extremities, which gradually increased to perfect paraplegia. He died in April 1812, after coma of three days, his intellect having continued entire till that time.

"*Dissection.*—A firm, white, flat tumor, like a large bean, lay over the junction of the optic nerves. The ventricles contained twelve ounces of clear fluid. The left lobe of the cerebellum was much indurated, like schirrus; the right lobe was reduced to a mass resembling scrofulous pus."

Remarks.—On this case I would observe, that, no mention being made of the state of the spine, it may be presumed that the spinal chord was not examined. We have, therefore, no proof that there was not concomitant disease within the vertebral column itself. In the absence of such proof, no satisfactory conclusion can be formed. It appears to me, however, highly probable that the fluid from the ventricles had insinuated itself into the theca vertebralis, giving rise, by its pressure, to the paraplegic symptoms; which symptoms did not appear until evidences of organic mischief had existed for a considerable time. It cannot, therefore, be considered as a satisfactory example of cerebral paraplegia.

CASE II. "(From MORGAGNI, lxii. 15.) A man, aged forty-eight. *Symptoms.*—Acute headache for a year, followed by paralysis of both lower extremities, the superior extremities being sound. Died suddenly about five months after the commencement of the paraplegia.

"*Dissection.*—The left lobe of the cerebellum was almost entirely schirrous, of a pale flesh colour, and seeming to be composed of numerous small corpuscles closely compacted, without any interstice or any appearance of vessels. A small part only on the upper surface was in a healthy state. The corpus callosum, fornix, and some of the other central parts of the brain, were much softened and broken down.

Remark.—In this case, also, the spine is not mentioned: consequently, no positive conclusion can be drawn from it.

The third Case is quoted by Dr. Abercrombie from the eleventh volume of the Edinburgh Journal, p. 470. I give it in an abridged form.

Symptoms.—Pain of the head, afterwards fixing chiefly in the occiput, and extending down the neck. Occasional vertigo and sickness. After five months, hemiplegia of the left side; imperfect vision. At length, fits of stupor; blindness of right eye; failure of memory; paraplegia. A fortnight before his death, paralysis of the upper extremities also.

Dissection.—On the surface of the pons Varolii, there were two triangular fleshy tumors, united by their apices; the base of the one extending into the right crus cerebri, that of the other into the medulla oblongata. Much effusion under the arachnoid membrane.

Remarks.—It is much to be lamented that the post-mortem examination did not extend to the spine, as in all probability traces of inflammation would have been found along the spinal arachnoid, with effusion within the theca. This is a fair inference from the symptoms narrated. From an early period of the disease, the pain extended from the occiput down the neck, and considerable effusion was found under the arachnoid of the cerebellum. I have little doubt but that this pain arose from an extension of arachnoid inflammation along the spinal chord, and that effusion of serum supervened, which, accumulating first below, produced paralysis of the lower limbs, and, gradually ascending within the theca, at length similarly affected the upper extremities also. This case cannot therefore be regarded as furnishing any proof of the cerebral origin of paraplegia.

I shall not cite the fourth Case of Dr. Abercrombie, because it is an example of general and complete paralysis, rather than of paraplegia. It would also be liable to the same exception as the former, the spinal chord not being at all mentioned.

It has already been stated that the above cases were not adduced by my learned friend as satisfactory proofs of cerebral paraplegia, but merely as examples of morbid changes *in cranio,* occurring *with* paraplegia. Aware of Dr. Abercrombie's indefatigable zeal in pathological research, I was desirous of ascertaining whether he had since obtained any more satisfactory information on the subject, especially with regard to the state of the spine in similar cases. From a letter with which I was favoured in December last, in answer to some queries of mine, the Doctor appears to look with more distrust on many of the alleged cases of cerebral paraplegia, and candidly remarks—"The more I see of it (paraplegia), the more perplexed I am with regard to its pathology. I have been led to believe that it does arise from disease about the base of the brain; but no satisfactory facts have occurred to me illustrative of this view of the subject, in addition to those which I have formerly referred to."—"I agree with you in doubting whether the chord has been sufficiently examined in those cases that have been ascribed to disease of the brain." Thus the powerful authority of Dr. Abercrombie cannot, with any propriety, be now adduced as confirming the supposed cerebral origin of paraplegia.

II. Dr. BAILLIE's *Cases of Paraplegia.*

In respectfully examining the recorded data on which that excellent physician founded his opinions, I trust I shall not be chargeable with presumption. The paper which, in the southern part of our island, produced the greatest impression, in reference to the cerebral origin of paraplegia, appeared in the sixth volume of the Transactions of the London College of Physicians. In that communication, the author candidly admits that he had "not had much opportunity of becoming acquainted with the morbid appearances of the disease;" and, with his characteristic modesty, offers his remarks, in order that the opinion "may be either established or properly limited by the future observations of other practitioners."

In the commencement of the paper, Dr. Baillie states it as his opinion that "in adults, where there has been no accident affecting the spine by outward violence, paraplegia depends *most commonly* upon a disease affecting the brain itself." To illustrate this opinion, one case only is adduced, although several other examples appear to have occurred in the author's practice.

In this case, as the author remarks, "the diseased appearances of the brain were very strongly marked on dissection."

"The bones of the skull, more especially at the sutures, were more vascular than usual; the dura mater presented nearly its natural appearance, but the vessels of the pia mater were very much loaded with blood, and there were effusions of serum between the different membranes of the brain on both sides of it. The tunica arachnoides was opaque, and much thickened. The substance of the cerebrum was considerably firmer, and that of the cerebellum was considerably softer than natural. About four ounces of water were found in the lateral ventricles of the brain, and a considerable quantity of water was discharged from within the theca of the spinal marrow."*

Here, I would with deference observe, no mention is made of the state of the spinal marrow or its investing membranes. The water "discharged" from within the theca probably emerged from that enclosure, on the medulla spinalis being divided within a short distance of its commencement. We have, therefore, no *proof* that concomitant disease did not exist within the rachidian canal. We are not, indeed, informed at what period of the head-affection the paraplegic symptoms supervened, and are therefore unable, in the absence of an examination of the spine itself, to trace any extension of disease from the brain downwards. Yet, considering the change of structure which the arachnoid tunic of the brain had undergone, it is not at all improbable that the inflammation had extended to the arachnoid of the spinal chord; in which case, serous effusion within the theca may have been a direct consequence of the spinal arachnitis itself. It is not necessary, however, to rest our argument on any such probability. We have decided proof of water within the theca; *the presence of which alone, from whatever source it may have arisen, is adequate, I conceive, to account for the paraplegia, irrespective of any morbid condition of the brain.* If, therefore, the mechanical pressure of the serum upon the spinal marrow be admitted as a sufficient cause of the paraplegia, we are surely not justified in ascribing it to the state of the head.

No one will affirm, I apprehend, that the existence of so much disease in cranio will more satisfactorily account for the paraplegia, than the mere pressure of fluid within the theca. Numerous examples of still greater disease of the brain might be adduced, in which there had been no paraplegia; while, on the contrary, pressure from a fluid, or other foreign body, upon the spinal marrow, rarely exists without inducing paraplegia in a greater or less degree. The case, therefore, cannot be regarded as a conclusive instance of cerebral paraplegia. So far as this case is concerned, we may at least say, in the language of the Scottish courts, "Not proven."

In a note to the paper we have been considering, there is an allusion to the opinions of Sir Henry Halford, Sir James Earle, and Mr. Copeland, as favourable to the same view of the subject. The opinions of the two former of these gentlemen were probably communicated to Dr. Baillie in conversation. I have not, at least, been able to find any recorded statement of the view of the learned Baronet on paraplegia; and consequently have not the advantage of ascertaining the data upon which the opinion alluded to by Dr. Baillie has been founded. In carefully examining, also, the editorial notes by Sir James Earle, in his edition of the late Mr. Pott's works, in reference to the palsy of the lower limbs, I have been equally unsuccessful; having met with no notice of paraplegia from disease within the head. In the excellent observations of Mr. Copeland "on the Symptoms and Treatment of the Diseased Spine," there is, however, a passage, in which that respectable author gives it as his opinion, that there are cases of palsy of the lower limbs, the cause of which is connected with the functions of the brain: but no cases are adduced to substantiate that opinion; nor is it, indeed, stated whether the opinion be drawn from the author's own observation. The cases detailed in Mr. Copeland's work are examples of disease arising from injury of the spine, and are therefore irrelevant to our present inquiry.

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* Medical Trans. vol. vi. p. 22-3. Dr. Baillie states that he received the account of this examination from Mr. Pennington.

In reflecting on the prevalence of the opinion just considered, it may not be improper to advert, for a moment, to the astonishing influence of a great and good name in giving to an opinion, avowedly open to "further confirmation or limitation," and confessedly resting on an insufficient basis, all the weight and force of a legitimate induction from an ample number of facts. The estimable author suggested it, indeed, for additional illustration: yet such is the proneness of the human mind to repose itself upon authority, rather than exert its energies in diligent investigation, that the hypothesis —for, without an examination of the spine, it is but an hypothesis,—has been currently received with all the influential confidence of a well-established fact.*

I now beg to introduce the interesting document, by the late Dr. Baillie, which Dr. Gregory was so obliging as to put into my hands on the evening of the discussion before referred to, having first read it to the Society. It is folded up in the form of a letter, and marked at the back "Short Memoranda of Cases of Paraplegia." I give it verbatim.

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* In proof of the implicit admission of this doctrine, I may extract a sentence from the last edition of Dr. Mason Good's Study of Medicine, in which the lamented author, notwithstanding the vast extent of his medical and various erudition, affirms that "The best practical writers of the present day concur in opinion that paraplegia, like hemiplegia, is produced still more frequently by causes operating on the brain, than confined to the spine. Of this opinion is Dr. Baillie," &c. &c. (Vol. iv. p. 666.)

" FACTS RELATIVE TO PARAPLEGIA,

(*From a posthumous MS. of the late* Dr. Baillie.)

" A clergyman had gutta serena of one eye along with paraplegia.

" A nobleman had the vision of both eyes very much impaired in paraplegia from gutta serena, but this affection at length a good deal subsided.

" A gentleman had a temporary gutta serena, and an occasional dropping of one eyelid, with paraplegia.

" A gentleman had his memory much impaired, and his mind so confused, that he could not keep his own little domestic accounts, during the latter period of paraplegia.

" A gentleman had a dilatation of the pupil of the right eye, with an occasional dropping of each upper eyelid, in paraplegia. The dropping of the eyelids has subsided.

" Mr. Earle told me that he had attended a case of paraplegia, in which the intellect was extremely imperfect for a considerable time before the patient's death. Tumors were found, upon dissection, to be formed in the brain.

" A young lady was subject to very severe headaches, to considerable drowsiness, and occasional defect of memory, in paraplegia.

" A young man had double vision for more than six weeks in paraplegia. His arms were numb and weak, and he had sometimes great difficulty in writing.

" A lady had severe headaches, and numbness and weakness in her hands, in paraplegia.

" A gentleman had great weakness and numbness of his hands in paraplegia, so that he could not distinguish, by his feeling, a shilling and a sixpence from each other.

" Another gentleman, in paraplegia, had gutta serena of his left eye; had great weakness in his arms, with indistinct feeling, so that he said he could not distinguish, by the touch, shillings and sixpences from each other.

" A lady, in paraplegia, had impaired vision, severe headaches, and weakness in her arms and hands, so that often objects that she held in her hands would drop from them.

" A gentleman, in paraplegia, had much giddiness of the head, and could write (from the weakness of his hands) with great difficulty.

" A gentleman, in paraplegia, had great confusion of the head, occasional defect of memory, occasional paralytic imperfection of speaking, and often wrote very indistinctly. His hand-writing formerly was remarkably distinct.

"A gentleman, in paraplegia, had severe headache, the right eye blind, the pupil of the left eye a good deal dilated, and a memory sometimes defective.

(Signed) "M.B."

"*Dec. 9th,* 1822."

In presuming to offer any comment on these "Short Memoranda," I feel that I am treading on sacred ground. The very existence of such memoranda, in reference to so considerable a number of facts, clearly evinces the great attention which the venerated writer continued to pay to the subject of paraplegia. Brief as the notices are, there can be no doubt but that, on Dr. Baillie's own perusal, they revived in his mind a full and satisfactory impression of the cases to which they refer, and afforded a confirmation of his opinion that paraplegia often arises from cerebral affection. They certainly prove the frequent *coincidence* of affections of the head with paraplegia; but, as evidences of head-affection and paraplegia bearing the relation of cause and effect to each other, they must be regarded, in my humble opinion, as altogether inconclusive. The spine does not appear to have been examined: we have no proof, therefore, that the spinal marrow, or its meninges, were not also diseased. It may, indeed, be presumed, from a knowledge of Dr. Baillie's extent and accuracy of observation, that had any symptoms during life denoted disease within the spinal column, such symptoms would have been recognised and recorded; and that, in the absence of any such reference in the Doctor's Memoranda, we ought to conclude that no such symptoms existed. And, most assuredly, this is a fair presumption, so far as the more obvious characters of spinal disease are concerned. It is possible, however, that some of the less evident affections of the spinal marrow, and such particularly as have been more recently investigated by the continental pathologists, may have escaped even the penetrating view of that very able physician; especially with a mind prepossessed in favour of the cerebral origin of paraplegia, and when occupied with cases exhibiting such undoubted evidence of cerebral disease. But allowing that every examination was made which, during the life of the patient, was possible, and that no disease of the spine could be detected, the same objection which has been urged against the cerebral origin of Dr. Baillie's published cases, would be also applicable to these,—viz. that fluid may have descended into the vertebral theca, and, by its pressure on the spinal marrow, have produced the paraplegia.

While, however, we may be unable to receive these brief notices as conclusive proofs of the cerebral origin of paraplegia, we are ready to admit that the hypothesis which they uphold carries with it an air of considerable probability, but which an examination of the spine, as well as of the brain, in future examples of a similar kind, can alone verify or confute. In a practical point of view, these posthumous contributions ought, notwithstanding, to be received with grateful acknowledgment; inasmuch as they direct the attention of the physician to the intimate connexion which subsists between morbid conditions of the brain and morbid conditions of the spine; and the absolute necessity of carefully attending to every cerebral symptom in the treatment of paraplegia. In truth, both the brain and the spinal marrow should be vigilantly watched, and every morbid symptom in either part strenuously opposed, in our endeavours to remove the disease. Exclusive attention to the one, whatever may be our view of the proximate cause of paraplegia, can only lead to error and disappointment.

Agreeably to the plan proposed in the commencement of this paper, I now proceed to consider the opinions of some other eminent pathologists on the same subject. The length to which the preceding observations have already extended, will, however, only permit me to advert to these authorities very briefly. The number of cases possessing *any* claim to be considered as examples of "cerebral" paraplegia, is not indeed considerable; and of that number, by far the largest proportion is liable to the same objection which has been urged against the cases already considered,—viz. that the spine was not examined; the morbid condition of the brain having been gratuitously regarded as fully adequate to the production of the paraplegia. Indeed, the state of the spine has been very rarely investigated in those cases which had exhibited strong characters of head-affection; and hence our illustrations are necessarily far less numerous than might have been supposed. Even the late Dr. PARRY, that distinguished pathologist and philosopher, at the close of a life ardently devoted to medical science, confesses that only "one instance of investigating by dissection the cause of paraplegia" had occurred to him. To that instance we shall presently refer.

The invaluable work of MORGAGNI yields but little specific information on our present subject. One example recorded by that indefatigable pathologist has already been cited. In another instance of paraplegia which followed hemiplegia, the author found an accumulation of serum between the dura and pia mater; but he is altogether silent with respect to the spine. It is highly probable, from the accumulation of serum, as well as from the fact of the paraplegia having succeeded to the hemiplegia, that, in this case also, the fluid insinuated itself into the theca vertebralis, and thus gave rise to the paraplegic symptoms.

In the admirable collection of BONETUS, I have been equally unable to obtain any satisfactory examples of "cerebral" paraplegia. In the fifteenth section of his first Book, he has indeed given us, with his accustomed conciseness, the post-mortem appearances of an example of paraplegia occurring "in phrenitico, ob serum multum in ventriculo medio deprehensum, cum siccitate medullæ cerebri et membranorum." But, as no mention is made of the spinal canal, and as, in all probability, the serum, by gravitating into the vertebral theca, had an important influence in producing the paraplegia, no proof of its merely cerebral origin can be drawn from such a statement.

In the "Collections from the unpublished Medical Writings" of Dr. PARRY, is the result of that single opportunity of investigating by dissection the cause of paraplegia, to which we lately alluded. "In that, the membrane investing the spinal marrow, as far as consistently with a due regard to appearances it could be traced, was almost every where of a deep red colour, from excessive vascularity."—"The patient to whom I allude," says Dr. Parry, "had the affection first in the lower limbs, and afterwards in the hands also; finally, he died phrenitic. Conformably to this latter symptom, the pia mater was found in a state of inflammation."* (Vol. i. p. 510.)

This is an important fact, not only as proving the coexistence of disease in the brain and spinal marrow, but also as exhibiting, in the progress of the case, that extension of disease from the spine to the head which sometimes occurs, especially when the tunica arachnoides is the principal seat of inflammation. If the spine had not been subjected to the test of examination, an ordinary observer, forming his opinion of the case chiefly from the predominating affection of the brain, which occurred during its latter stages, would probably have ascribed the paraplegia to the state of the head alone; so important is it to ascertain the exact order and succession of symptoms in the more complicated forms of disease.

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* Candour requires me to add, that Dr. Parry believed in the probability of paraplegia sometimes arising from cerebral causes, although his philosophic mind did not allow itself to rest on such a mere probability.

The researches of the French pathologists, which have contributed such ample stores to our previous information relative to the morbid conditions of the brain and spinal marrow, do not seem to have been specially directed to the elucidation of our present subject; yet, incidentally, they afford very interesting illustrations on some collateral points.

In a recent work, by le Docteur BOUILLAUD, of Paris, entitled "Traité Clinique et Physiologique de l'Encéphalite et des Suites," a few examples of morbid changes of structure are given as connected *with* paraplegia; but generally without any reference to the state of the spine. One of the cases, in which we have to lament the same deficiency, exhibited, on dissection, considerable effusion into both the lateral ventricles, with marks of high inflammation in the surrounding cerebral substance. In the absence, therefore, of any evidence respecting the state of the spine, it is not unfair to conjecture that the fluid from the ventricles had made its way into the theca, and thus compressed the spinal cord.

The case of Marie Machelein, cited by M. Bouillaud, is not a little important, as showing *the concomitance of cerebral and spinal disease*. The patient had left the hospital (des Enfans) "almost cured" of a hemiplegia of the right side. Four months after, weakness of the lower limbs supervened, and soon increased to perfect paraplegia. Motion was first lost; then sensation. At length, respiration became affected. In the progress of the disease, the arm originally paralysed became still weaker. *On dissection*, that portion of the left hemisphere which forms the roof of the lateral ventricle was found so indurated as to resist the scalpel. There was effusion of coagulated blood within the vertebral canal; the spinal marrow itself was completely disorganised, and reduced to a kind of reddish "bouillie." (P. 187-8.)

Here we have a striking exemplification of the necessity of examining the spine as well as the head, in order to form a correct judgment of the real cause of paraplegia. Had not the state of the spinal marrow been investigated, the mere fact of the paraplegia having followed the hemiplegia might have strengthened the supposition of the former, as well as the latter, having its origin within the head.

Still further to illustrate the co-existence of disease in the brain and spinal marrow, and to which coincidence, in all probability, several of the alleged cases of "cerebral" paraplegia must have been referred, if the spine as well as the head had been duly examined,—I shall now introduce a case from the masterly work of le Docteur OLLIVIER, "De la Moëlle Epinière, et de ses Maladies," (à Paris, 1824.)

Margaret Marshall, æt. seventy-nine, had laboured under pulmonary catarrh, and violent pain of the head, but without any general disturbance of the cerebral functions. She then experienced a sense of formication, followed by a diminution, and at length an entire loss, of feeling in one arm and leg. Ultimately, there was complete paraplegia. Upon dissection, the membranes of the brain were found to be infiltrated with serum. There was also a general mollescence ("ramolissement") of the brain, and of the whole diameter of the spinal marrow, to the extent of an inch and a half, in its cervical portion.—May we not presume that, in this case also, if the state of the spinal cord had been overlooked, the paraplegic symptoms would have been solely attributed to a cerebral cause?

In another example from the same incomparable treatise, notwithstanding the degree of cerebral mischief which it exhibits, the paraplegia may probably have arisen from the concomitant disease of the spinal marrow. I adduce it as an additional argument against confiding in the alleged cases of "cerebral" paraplegia; and as also furnishing an additional motive for investigating both the spine and the head in the future instances of the disease.

Louis Spréval had been observed to be remarkably indolent for several years. He walked with an unsteady gait, and was sometimes maniacal. At the end of nine years, the power of motion was lost in the lower extremities, which retained, notwithstanding, their sensibility. On dissection, the cranium was found to be of thrice its ordinary thickness. The dura mater was thickened, as was also the pia mater covering the pons Varolii and the corpora olivaria. The pia mater investing the corpora olivaria et pyramidalia being raised, these bodies were found in a pulpy state. *The anterior part of the spinal marrow exhibited a similar condition.*

The inquiry has hitherto been confined to published documents. I have not been, however, inattentive to the opinions of those among my brethren, to whom I had access, whose pathological knowledge might enable them to throw light upon the subject; and although I should not feel myself justified, without express permission, in specifying names, there can be no objection to my stating the general result of such conversational inquiries. Of twelve physicians and hospital surgeons, who kindly favoured me with their sentiments, the greater number candidly admitted that they had not particularly investigated the subject, but had rather taken the opinion for granted, as proceeding from such high authority. Two of these gentlemen informed me that they had long been dissatisfied with the doctrine. All, with two exceptions, acknowledged that no opportunity of verifying the opinion, by an examination of the spine itself, had yet occurred to them. The respectable individuals forming the two exceptions were, however, not less distinguished than the rest for pathological research. One of them informed me that he had carefully inspected the spinal column, in many examples of aged females who had died with symptoms of paraplegia, without finding within it any trace of disease; the morbid appearances having been confined to the head alone, and consisting chiefly of serous effusion under the tunica arachnoides, and into the lateral ventricles.

This communication appeared to me of so much importance, that I ventured to request further particulars; but have not hitherto been so fortunate as to receive them.

The other gentleman, whose opinion likewise favoured the cerebral origin of paraplegia, assured me that he had seen several cases of paraplegia, similar to those described by Dr. Baillie, in which the brain alone was affected, and the spine, though carefully examined, found perfectly free from disease.

These statements are undoubtedly of considerable importance. The object of this paper being to elicit truth rather than to subvert an opinion, I shall feel highly gratified if this general notice of the conversations alluded to should induce the two gentlemen concerned to favour the public with a more particular account of those cases and dissections, should they have been the subject of record. I am well aware of the difficulty of preserving an exact recollection of morbid appearances long after they have been observed: and I am not insensible to the important influence of circumstances, apparently trivial, in the history and description of the structural changes induced by disease. I shall therefore anxiously wait for that additional confirmation which a reference to the written memoranda of these cases may afford.

Notwithstanding, however, these two opposing statements, the conclusions fairly deducible from the *recorded* examples of the disease remain unaffected, and may be thus expressed:

1st. From the cases of paraplegia examined in this paper, as well as from every other recorded example which the writer has been able to obtain, no proof whatever can be adduced of the disease having arisen from cerebral causes alone.

2dly. From the history and symptoms of several of the alleged examples of paraplegia, it is more probable, in the absence of direct proof, that concomitant disease existed within the spinal column, than that the brain alone had suffered from morbid changes.

3dly. In some other of the alleged examples, in which fluid was discharged from the vertebral theca, we have no proof but that the mere presence of the fluid within the theca, independently of the cause which produced it, may have occasioned the paraplegia.

To these general inferences, I might adduce several unquestionable examples of co-existing disease in the brain and in the spinal marrow; and might also prove, by recorded facts, the ultimate extension of disease from the spinal cord to the brain, during the progress of paraplegiæ which had commenced in the spine, and had long remained without any cerebral affection whatever. I might also prove, from incontrovertible premises, that true spinal paraplegia has sometimes been attended with symptoms indicative of slight cerebral affection, in cases which, after death, exhibited no change of structure within the cranium, but great disorganisation of the spinal marrow itself. Such evidence would be chiefly valuable as showing the high importance of carefully attending to the spinal, as well as the cerebral, symptoms, of the disease; and of not hastily concluding that the paraplegia arises from a morbid condition of the brain, merely because it is attended with some degree of cerebral disturbance. But the proper limits of this paper having already been exceeded, I must reserve these materials, as well as some collateral facts which have fallen under my own observation, for another opportunity. Should life and health permit, I may hope, on some future occasion, to submit them to the profession, together with the results of some other inquiries connected with the diseases of the brain and spinal chord.

Before taking leave of the subject, I must beg, however, explicitly to state that, strongly as I contend for the verdict of "Not proven," in relation to the evidence hitherto recorded in favour of the "cerebral" origin of paraplegia, I am by no means prepared to argue against the *possibility* of its proceeding from cerebral causes alone. On the contrary, from the connexion known to subsist between certain lesions of the brain and certain paralytic affections, I am only surprised that indubitable proof of such an origin has not already been established. It is well known that certain morbid changes occurring in a small portion of one hemisphere of the brain, have induced a paralysis of one leg; and it is equally true that a more extensive lesion of one hemisphere has occasioned a palsy of one entire half of the body. Now it is very conceivable, that a degree of cerebral injury greater than the former, yet less than the latter, may occur; and that the paralytic affection thereby induced, instead of amounting to a perfect hemiplegia, may merely include the leg, thigh, and corresponding half of the pelvis. Pursuing the supposition still further: should it ever happen that the same extent of injury takes place, at the same time, in both hemispheres, we should then have precisely that condition of brain from which we might expect the production of paraplegia. I am fully aware that, most commonly, one hemisphere only is affected; and that, hence, hemiplegia is by far the most prevalent form of paralysis. I am also aware that, when both hemispheres are extensively injured, universal palsy is the general result: but we may readily admit the possibility of a degree of disease in both hemispheres, short of that which would have produced universal palsy, yet sufficient to paralyse the lower half of the body, or a more considerable portion of it, taken transversely. Dr. Baillie himself thought it probable that paraplegia, when produced by disease within the head, arose from a morbid condition of both hemispheres; but cautiously proposed the subject for future investigation. Difficulties, indeed, meet us at every step. The diseases of the nervous system continue to be involved in peculiar perplexity. Cases of paraplegia have lately occurred to my distinguished friend Dr. Abercrombie, in which no morbid change whatever could be detected either in the brain or spinal marrow! Yet let us not despair. The path may indeed be rugged, and our progress slow and interrupted, but doubtless some good will be achieved; while, in the mean time, the very effort is useful, and brings with it its own reward.

Great Ormond-street; April 10th, 1827.

SMALL-POX AND VACCINATION.

On the Permanent Evidences of Successful Vaccination. By G. GREGORY, M.D. Physician to the Small-Pox and Vaccination Hospital.

IN offering a few observations on the phenomena of vaccination, and more especially on the appearances of vaccine cicatrices, I am fully sensible that I enter on a field of investigation where very little remains to be gleaned. The scientific labours of JENNER and WILLAN, (not to mention a host of authors of lesser name,) have almost, if not altogether, exhausted the subject; and, under such circumstances, it may reasonably be asked, why I thus recur to it with such small prospect of novelty or benefit? My only excuse is the earnest hope that it may prove useful—first, to refresh the memory on certain minute points connected with vaccination; and, secondly, to show that the lapse of twenty years has only served to strengthen the conclusions of the best early writers.

No reasonable doubt, I presume, can be entertained that the occurrence of small-pox after vaccination is considerably more common than that of small-pox after variolous inoculation. Could it be made to appear that the one was not more frequent than the other, we should at once have a satisfactory explanation of the circumstance in the theory of idiosyncrasy, or "*peculiar susceptibility in the body of the variolous poison.*" That this principle is sufficient to account for a certain proportion of the cases of small-pox which occur after vaccination, appears to be clearly and indisputably established; and hence it is that the arms of some of those who thus suffer will be found, on examination, to exhibit the most perfect characteristics of a vaccine cicatrix. When, however, the disease *does* occur under such circumstances, it will, with very few exceptions, differ so materially in its symptoms and progress from that of common small-pox, that it may, with perfect propriety, and in strict accordance with the language of the old authors in physic, receive the name of Variolæ Spuriæ, Bastard Small-Pox, Chicken-Pox, or Varicella. In all its characters, it corresponds perfectly with the mild disorder (so denominated) under which the inoculated still occasionally suffer, as they used formerly to do before vaccination was known or thought of. The following case may be taken as an illustration.

Case I.—Lieutenant Wm. Gregory, of the Royal Engineers, (the author's brother,) was inoculated for small-pox at Canterbury, in the year 1794. He had the disease with rather more than usual severity, and for two or three days some little uneasiness was felt for him. Twenty-nine years afterwards,—viz. in January 1823,—after a long residence in Nova Scotia, he accidentally visited the Small-Pox Hospital in my company, and was at the bedside of several patients labouring under a very malignant form of small-pox. In about a week afterwards, he was unexpectedly attacked with rigors, headache, and other marks of fever. On the third day an eruption of papulæ took place, which ran the usual course of highly modified small-pox,—in other words, of chicken-pox. The pock turned upon the fourth or fifth day, and in less than ten days afterwards he was perfectly well, and following his usual avocations.

The disease resembled, in every respect, the milder forms of eruption which are now so common after vaccination. I feel perfectly convinced that similar cases were very frequent before the discovery of the cow-pox, but they excited less attention than now, on account of the greater comparative prevalence of true small-pox, natural and inoculated. To this form of chicken-pox I would venture to apply the term Varicella Variolodes, in contradistinction to the "*varicella symphatica*" of Willan.

While I thus express my perfect conviction of the sufficiency of the principle of idiosyncrasy to explain many cases of small-pox after vaccination, whether complete or incomplete, I must acknowledge, at the same time, my belief that the excess of such cases over those of secondary small-pox, is explicable only on the theory of *imperfect vaccination*,—that is to say, on the principle that the system may be partially and imperfectly saturated with the vaccine virus, giving thereby not a complete and permanent, but a partial and temporary security. This doctrine is that of Dr. Jenner, who acknowledges, however, that it was first given to the world by Mr. DUNNING, of Plymouth.* Dr. Jenner, speaking of the varieties in the appearance of the vaccine vesicle, states that they exist in all degrees, "*from those trifling deviations which prove no impediment to the vaccine security, up to that point of imperfection in the pustule which affords no security at all.*"—"In saying *no security at all*," adds Dr. Jenner, "I perhaps commit an error; for it strikes me that the constitution loses its susceptibility of small-pox contagion, and its capability of producing the disease in its perfect and ordinary state, in proportion to the degree of perfection which the vaccine vesicle has put on in its progress; and that the small-pox, if taken subsequently, is modified accordingly." These were Dr. Jenner's views on the 23d February, 1806; and that his further experience, corroborated then, is proved from this, that they are reiterated and forcibly urged in a circular letter which I received from him on the 28th May, 1821, within less than two years of his death.

The principle appears to me to be perfectly correct, and in fact to be the most important of all those which influence the production of small-pox in a large proportion of mankind at the present day. It may be thus more fully developed. Perfect vaccination affords, with certain exceptions, complete and permanent security against the small-pox. Imperfect vaccination affords security more or less permanent, more or less complete, according to the degree of imperfection in the vesicle, and the consequent saturation of the system. The whole extent of my experience at the Small-Pox Hospital for the last five years, my observations on the phenomena of revaccination, and the results of my correspondence with practitioners in the country, bear out this principle in its fullest extent.

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* See WILLAN on Vaccine Inoculation, 4to. 1806; page v. of the Appendix.

Occasional exceptions to this, as well as to any other great pathological doctrine, have doubtless occurred, and may therefore occur again, to warn us how we tie down nature too closely to rules; but the general principle still remains untouched.

Presuming it, then, to be well ascertained, the question comes to be, *what are the evidences of perfect vaccination?* and how can we venture to pronounce an individual safe from the perils and dangers of small-pox? The evidences of vaccination are of two kinds,—the temporary and the permanent. The former (in other words, the appearances of the vesicle,) are so admirably detailed by Jenner and Willan in their respective works, that it would be quite unnecessary to repeat them here. The latter have attracted less attention, but are not the less deserving of a full investigation. I mean the various appearances of vaccine cicatrices. To point out these, and to show with what modifications they are to be received as evidences of the purity and perfection of the vaccine process, will be my object during the remainder of this paper.

1. A true and perfect vaccine scar should be distinctly defined, even after the lapse of twenty years,—that is to say, the specific inflammation should have penetrated the cutis vera to such a depth that the scar which results is clearly to be traced in all periods of after-life. In order that this should take place, it is nearly indispensable that the scab should remain on—or, at any rate, that cicatrisation of the sore should not be completed, prior to the twenty-first day. I have seen, however, cases where the cicatrix was formed as early as the fourteenth or fifteenth day. In all such cases the impression of the scar wears out in the course of time, the vaccination is imperfect, and the system is either partially or, after the lapse of a certain number of years, wholly open to the attacks of small-pox.

2. A true and perfect vaccine scar should be circular, or nearly so. That is to say, the specific inflammation should not have been superseded by common inflammation. Should this, indeed, take place *late* in the disease, the scar will be irregular, but the vaccination may still be perfect. When, however, common inflammation supervenes early, the scar is irregular in its form, the vaccination is incomplete, and the system remains susceptible of small-pox, more or less modi-

fied, according to the degree of perfection which the vaccine vesicle may previously have attained. The diameter of the scar, provided that scar be circular, is of little moment. That of a sixpence or small wafer appears to me to be the largest which is compatible with complete security.

3d. The perfect vaccine scar should be indented and radiated. It may be proper to premise that the vaccine vesicle has a regular organisation (consisting of cells tied down by a central band) like that of variola; and it is certainly a mark of the perfection of the vaccine process, when the indentations and striæ of the original cells remain to testify that the vesicle was uninjured in its progress. I am very ready to acknowledge, however, that these marks are not essential to the perfection of the vaccine cicatrix. I have seen several cases of the most highly modified chicken-pox after vaccination, where such characters in the scar have not been perceptible.

I proceed next to point out, in a summary way, the sources of such irregularities in vaccination as lead to imperfect cicatrices, and to partial or temporary saturation of the system.

1. The first is the employment of effete virus,—of virus, that is to say, taken at too late a period of the disease; of virus injured by heat, by long keeping, or by the rust of a lancet. The vaccine fluid, as Willan long ago remarked, is the most delicate of all the morbid poisons, and is the most easily altered in its qualities. I have never vaccinated with points and glasses since my attention was turned to the subject; and, however I may feel the necessity that (in the country sometimes) exists for this measure, I am strongly convinced of the benefit that would arise from vaccinating, in all cases whatever, with recent lymph, taken not later than the eighth day.

2. The second source of imperfection in the vaccine vesicle and subsequent cicatrix, is the pre-occupation of the system by some important process, such as teething, or by some actual disease, such as inflammation of an important viscus, fever, hooping-cough, porrigo favosa, or herpes. In such a state of body as this, the vesicle is apt to be converted into a pustule, and the specific to be superseded by common inflammation. The following case may be taken as an illustration.

Case II.—In the summer of 1823, I was requested to visit a girl in Spa-fields, labouring under severe small-pox subsequent to vaccination. She was one of a family of five, all of whom had been vaccinated at the Small-Pox Hospital. I found the patient with a load of small-pox, which were afterwards slightly modified in their progress. The patient, however, happily recovered. The scar upon the arm in this case was large and irregular; and the mother told me that the inflammation during the vaccination was so severe, that she was obliged to cut the infant's dress, and to keep the arm constantly wetted with cold lotion. Notwithstanding which, Mr. Wachsel, then resident surgeon of the hospital, gave it as his opinion that the process was staisfactory. The scars upon the arms of the other children were perfect, and they all remained in the same room with their sister during her illness, without suffering in the slightest degree.

3. The third, and the only other source of imperfect vaccination with which I am acquainted, is the institution of the process at too advanced a period of life. All those who are in the habit of vaccinating must know how much more complete the vesicle appears in healthy children between the second and fourth month after birth, than at later periods of life; and, in fact, how difficult it is to get perfect appearances in adults. The principle I believe to be this:—In very early life, the extent of inflammation upon the arm bears a much larger proportion to the rest of the body than at an advanced age; and it is reasonable to presume that the system will be more thoroughly imbued with the vaccine virus when the mass of blood and humours is small, than when it is great. This affords a second reason why the mode of town vaccination is so much superior to that of the country.

In London, and I presume in all large towns, children are regularly brought to be vaccinated as they attain the age of three or four months: whereas, in the country, periodical vaccinations of parishes take place, without reference to age.

I would wish to offer one observation with reference to the gradations in the modifying influence of imperfect vaccination. It is, I believe, contended by some (even of high authority in the profession,) that vaccination will always secure the constitution from the loss of life: in other words, that the degeneracy of vaccine saturation stops short at that point at which life is put in danger. My experience does not warrant me in subscribing to this position. I believe the cases to be rare, but yet in practice it will be found that there are imperfections in the process of vaccination, which, after the lapse of a certain time, leave the system as completely open to the full influence of the variolous poison as if vaccination had never been practised. In illustration of this remark, I refer to a paper which has appeared in a late Number of the London Medical and Physical Journal.

I have already stated, that my observations on *revaccination,* as well as the results of my correspondence with country practitioners, equally bear me out in these views. I select the following from my note-book as a specimen of the former; and, with respect to the latter, I shall prefix a brief notice from J. DALTON, Esq. an eminent surgeon of Bury St. Edmunds, of the epidemic small-pox which occurred in that town in 1825. The remarks of this gentleman, written without knowledge of, or reference to, my own ideas on the question, will, I think, be found peculiarly deserving of attention.

CASES III. AND IV.—On the 22d July, 1822, I revaccinated Miss M—, second daughter of Lord D—, and at the same time a maid-servant in the family of the Countess of Denbigh. The lymph which I employed was from a most perfect vaccine vesicle (seventh day), without the slightest surrounding areola, and from a beautiful and healthy child.

The young lady (being then fourteen years of age,) had been vaccinated with great care by Dr. Jenner. The scar upon her arm was circular, well defined, and in every respect perfect. The maid had been vaccinated by a country practitioner, without any particular precaution. The scar upon her arm was large, oblong, and irregular, with a raised line running down its centre, as if considerable and extensive ulceration had once existed there.

In the first case, the revaccination caused only a slight irregular inflammation, subsiding entirely on the fourth day. In the latter case, the vaccination advanced, though in a modified way. An extensive areola formed on the sixth day. On the eighth, the areola was subsiding, but the arm was still considerably inflamed. The vesicles had began to desiccate. There was also present considerable swelling of the axillary glands, with pain.

Is it not probable, from the result of these cases, that the maid-servant would have taken small-pox had she been exposed to it, and that the young lady would not?—that in the one case the constitution was saturated with cow-pox, and in the other that it was not?

I shall conclude with Mr. Dalton's communication.

On Small-Pox as it prevailed epidemically at Bury St. Edmunds, in 1825. By J. DALTON, Esq. Surgeon of that place.

THE variolous epidemic which so generally, and in many instances so fatally, prevailed here in 1825, and against which vaccination made such a bold and successful stand, broke out the latter end of July or beginning of August. It was of the confluent kind, the symptoms running very high; it had no particular or unusual character: it was a severe confluent small-pox, the phenomena of which I need not describe.

The entire population of Bury is something more than ten thousand. In November, 1824, the Court of Guardians ordered a general inoculation for the cow-pox, and the number of poor allotted to me for vaccination, (having one of the five medical districts,) was 149; added to which were several out-settlers, amounting to twelve. Of this number, from strong prejudice, little more than half submitted to be vaccinated. Ten cases of small-pox after vaccination fell to my share: the eruptive fever was generally severe, in three or four cases as much so as in confluent small-pox; the pustules few, excepting in one case. Indeed, the disease appeared to have spent itself in supporting the eruptive fever, and to have had no power left to produce or perfect the pustules, which in every instance, excepting this one, did not stand over the fifth day. The pustules had not the character either of small-pox or cow-pox, they more resembled the chicken-pock; there was no secondary fever; and but slight sore-throat, in three or four instances only.

The severe case I have alluded to occurred in a young man of scrofulous habit, about nineteen years of age, who had been vaccinated twelve years before by a respectable surgeon. The eruptive fever was very intense; the pustules extremely confluent, particularly upon the face, flat and small, accompanied on the second day by a purple eruption, amounting almost to the purpura hemorrhagica. On the third day, bleeding gums supervened, with fetid breath, severe sore-throat, and great anxiety. These symptoms continued through the fourth and fifth days. On the sixth, they had somewhat abated. On the evening of the seventh day of the eruption, the pock might be said to be about to turn. *Turning* it could not properly be called, where there had been nothing to be termed suppuration. On the eighth day, the patient was convalescent.

This man surely had been saved, the period of his disease shortened, and the formation of a vast quantity of pus prevented, by his previous vaccination. From an examination of his arm, upon which there is a deep, large, cup-shaped scar, it appears he must have had, when vaccinated, much common inflammation, with suppuration of the cellular texture, under the vaccine pustule; a circumstance I always consider as destructive of the perfect security which cow-pox affords; and, in most instances of failure of perfect protection, I have generally found such a scar.

I will briefly add, that, where I have been induced, by the fears of my patients, to revaccinate as a test of their perfect security, I have invariably found a very extensive local inflammation of a mixed character, with great soreness and enlargement of the axillary glands, high constitutional irritation, and in several instances vesications threatening sphacelus, with an irregularly formed pustule, pouring out a semi-ichorous and ill-concocted acrid discharge.

Bury; Feb. 7, 1826.

On the Proportion of Cases of Small-Pox after Vaccination, &c. &c.

By Edward Morton, M.B. L.M. Physician to the Western Dispensary, and to the Royal Metropolitan Infirmary for Children, &c.

That cases of small-pox frequently happen after vaccination, is a fact that is now universally admitted among the profession; but the proportion in which these occur has not, I believe, as yet been correctly ascertained. As this is a question which can alone be decided by careful observation, I beg to submit to your readers the result of my experience on the subject during the last year; premising that it is derived from notes made at the time from cases passing under my eye, or from my own personal inquiries.

From the 1st of April, 1826, to the same date in the present year, there have been admitted, under my care, at the Royal Infirmary, 810 children, of or under twelve years of age. Of these, 126 had the natural small-pox; 22 the inoculated small-pox; 261 remained unprotected by either; and 401 have been vaccinated. The latter will alone engage our attention upon the present occasion.

Out of the above-mentioned 401 children who have been subjected to vaccination, seventeen have had small-pox afterwards. Of these, ten have merely been reported to me as such upon their admission; the remaining seven have been seen and attended by myself. Allowing, therefore, all the cases above referred to actually to have occurred, (and I have no reason whatever to doubt the fact,) it will be seen that the instances of small-pox that have occurred subsequently to vaccination, out of the above number of children, have been only four and a fraction in every hundred. If the accuracy of the reported cases be questioned, then there will have been less than two in the hundred. In either case, the proportion is so small as not to invalidate, in the slightest degree, the general efficacy of vaccination.

Of the foregoing cases, those which did not fall under my own observation were uniformly represented as having been extremely mild, and quick in passing through their different stages, the children seldom being at any period confined to their beds; and those that I myself superintended were of exactly the same description. One of the patients, six months old, had only two pocks; while her elder sister, from whom she received the infection, who had not been vaccinated, died of confluent small-pox. If therefore vaccination, even when successfully practised, do not invariably preclude, at any future period, the occurrence of small-pox, (for I must observe, that I have seen several cases, some of which will be mentioned hereafter, where it has happened in children whose arms have exhibited the scars supposed to indicate a perfect and correct performance of the operation,) yet it is unquestionable that it is capable of preventing all the dangerous symptoms of that dreadful malady; that the subsequent disease is uniformly a mild one, and has in no instance, within the knowledge of my professional friends or myself, ever proved fatal.

The following cases, which have come to my knowledge within the last twelve months, appear to support the opinion of Dr. GREGORY and others, that small-pox after vaccination happens only in particular families; and that there exists in these a peculiarity of constitution which predisposes them, in an unusual degree, to be attacked by it. They also seem to render it probable that parents, who have themselves suffered from the ravages of small-pox, may be able to impart to their offspring, in consequence, a predisposition to it.

I.—Sarah Lumley, ætatis five years, was admitted June 6th, 1826, for modified small-pox: had 120 pocks, perfectly distinct, which did not observe the regular stages. She soon recovered perfectly. This child, when two years of age, was vaccinated at Rowland Hill's Chapel, and had a card given to show that the operation had been successfully performed.

Her younger brother, who had not been vaccinated, soon afterwards became affected with confluent small-pox, (apparently in consequence of infection received from her,) and was attended by myself.

The mother of these children informed me, that some years ago she had one of her children inoculated with the small-pox; that two others took the infection from her, and died;* that she herself, in her youth, underwent small-pox, and suffered severely from it; and that her husband also passed through it, and is much pitted in consequence.

II.—From the mother of a patient of the name of King, who had small-pox after vaccination, I learned that she herself had undergone small-pox in a severe manner; that her husband was also much pitted with it; and that three of her children, who had been previously vaccinated, passed through small-pox afterwards, but soon recovered.

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* "Died." So here the mother, in attempting to protect one child by inoculation, was actually the means of destroying two, who possibly might never have casually taken the disease.

III.—William Luke, ætatis five years, was admitted May 23d, 1826, for modified small-pox, (having been previously vaccinated at the Small-Pox Hospital,) and was soon well. Has three distinct perfect scars in the left arm, and two in the right.

The sister of the above was also vaccinated at the Small-Pox Hospital when an infant, and now exhibits four small, indented, circular scars in the left arm. About three years ago, she underwent small-pox also, and had a great many pustules, (the mother counted thirty-six upon one arm,) but soon recovered.

The father of these children has never had the disease; but the mother had it severely, and is thickly and deeply pitted.

IV.—Mary Malony, ætatis one year and six months, was admitted December 15th, 1826, for modified small-pox, and was speedily discharged cured. This child was vaccinated about a year previously. The operation was performed in both arms, but only one pock arose in the left, which now exhibits a proper circular scar.

John and Ellen, the brother and sister of the above, were also reported to me by the mother as having had small-pox after vaccination; which she described as resembling the eruption which I witnessed, during its progress, in Mary.

V.—Jonathan and Richard Cooper, two brothers, admitted in March 1827, are also among the numbers of those reported to have had small-pox after vaccination, but in which the disease presented nothing remarkable.

15, *Eaton-street, Grosvenor-place;*
April 7*th*, 1827.

Case of Small-Pox twenty-three Years after Vaccination; with Observations. By C. Heineken, M.D.

As the following case excited considerable interest, and awakened some slumbering prejudices in the circle within which it occurred, I am induced to publish it; and I shall do so in the words of the mother of the lady to whom it refers, in order that it may escape the possibility of that taint and sophistication which even a moderate portion of professional moulding is so apt to confer; a species of tampering with a witness, to which we are indebted for most of the many "false facts" which have become a reproach and a bye-word to us. "Valeat quantum valere potest."

"My daughter was vaccinated at the age of four or five days, so long ago as the month of May, 1803. The operation was performed by Mr. Napp, a surgeon, who at that time resided in

Brompton-row, near Hyde Park. Dr. Poignand (who had attended me in my lying-in, and who was considered a gentleman of eminence in his profession,) saw the infant every day, and both gentlemen seemed perfectly satisfied that the vaccination had taken, and was good of its kind. Mrs. —— has several times been exposed to the contagion of the small-pox, particularly when about twelve years of age; and at school, a child of two years old, thickly covered with the small-pox, was brought into the room, and my daughter, in turn with others of the young people, took it in her arms, and nursed it on her lap.

"Twenty-three years elapsed between the time of the vaccination and that of Mrs. ——'s sickening for the small-pox: this last event happened on the 24th of last July. On the 30th, the disease first showed itself, and eleven days after (the 10th of August,) the pustules first began to mature. Six months elapsed from the introduction of the disease on the island to the period of Mrs. ——'s taking the infection; and it may be worthy of remark, that our house was surrounded by it, and immediately opposite to the church and ground where numbers were daily buried who had died of the complaint. We took your opinion in March, full three months before the time of her sickening."

In transcribing the above case, I have done so literally; and I take it for granted, upon the evidence which has been adduced, that the child had the genuine cow-pox at the age of four or five days. I know that the same child, now a woman, has just passed through, at the hazard of her life,—not a pseudo-variola, not a modified small-pox, or an exasperated varicella,—but as orthodox, old-fashioned a small-pox as any humoral pathologist could have wished for, or any friend to humanity have deprecated; and yet I acknowledge that, so far from weakening, it confirms my reliance upon the anti-variolous power of vaccination; for it proves that the introduction of that specific matter into the system at the extremely early age of four or five days, conferred immunity (and that too, in one instance at least, under circumstances of unusual exposure to the contagion,) for a period of twenty-three years! a sufficiently long term of exemption to induce the most prejudiced and sceptical to rank it amongst those exceptions which confirm the rule. It may perhaps, on the other hand, be urged by those who, in advocating the omnipotence of vaccination under all circumstances, are unwilling to allow any instance of its failure, that no evidence in detail has been adduced that the child ever had genuine cow-pock. This is certainly true: it is also true that the scar upon the arm is large, superficial, irregular, and undefined; that it wants what are generally termed its specific characters. But I am unwilling to admit that these specific characters must attach to it under all circumstances. I conceive that the permanence and depth of the cicatrix arise from its being (as all genuine cow-pox should be,) more than skin-deep; and that its round, circumscribed, marginated appearance is owing to the original boundary which, in a vigorous healthy system, was at the time of vaccination set up by a deposition of lymph into the surrounding healthy cellular membrane, to prevent its spreading: but I question very much whether we are warranted in expecting that such a process would generally be completed in an infant which had enjoyed only four, or at most five, days of independent existence. Admit, however, upon the sole, and what I consider insufficient, evidence of the scar, that two professional men of practice and experience were deceived themselves, or deceived others, and you have then the anomalous (I had almost said miraculous) circumstance of frequent exposure to, and in one instance actual and intimate contact with, a highly infectious disease during twenty-three years, with perfect impunity.

Upon a fair and impartial review of all the circumstances, I think, therefore, I am justified in saying, that the infant had the genuine cow-pox when four or five days old; that its antivariolous power continued in force for three-and-twenty years, and then ceased; and that its character ought to be rather exalted than depressed by the fact of its having exerted its influence so long, when its introduction had taken place at a period so nearly bordering upon the incipient verge of infantile existence. The wonder is, not that it failed when it did, but that it was so long available.

I may take this opportunity of stating, that, as far as my observations and inquiries go, no other well-authenticated instance of genuine small-pox after genuine and well-authenticated vaccination has occurred here: spurious cases of both are not wanting.

Before closing this subject, I must in candour state that, when called upon for an opinion regarding the propriety of inoculating the lady in question, I stated my conviction that vaccination was, in a very large majority of cases, a complete safeguard; that I reposed the most implicit confidence on it; that although some (comparatively few) instances of its failure had occurred, yet I considered them confirming exceptions, rather than the contrary, of a general rule; that it had been stated to lose its influence after a certain, or rather uncertain, period, but that I doubted the fact. I refused, on principle, to inoculate with small-pox; and I omitted (which I now regret) to re-vaccinate: but, if ever again small-pox should prevail, I would practise myself, and advise others to adopt, the plan of re-vaccination universally.

Funchal, Madeira; 28th December, 1826.

FUNCTIONS OF THE NERVES.

Cases pathologically illustrative of the distinct and separate Nervous Functions subservient to Voluntary Motion and Feeling.

By S. D. Broughton, Surgeon to His Majesty's 2d Regiment of Life Guards, and to the St. George's and St. James's Dispensary.

Case I.—E. Bundy, a dragoon farrier, about twenty-seven years of age, was admitted into the regimental hospital, November 27th, 1826, complaining of slight pain about the forehead and temples, and throughout the limbs. His tongue was pale and moist; the pulse about ninety, small and soft; the eyes had a natural appearance.

℞. Haust. Sennæ comp. stat. sumend.—℞. Pulv. Ipecac. comp., Pulv. Jacobi, āā ℈ss. M. capiat nocte.

Nov. 28th.—The bowels have been freely open; the pulse is reduced in frequency, and he is relieved from the pains.

Rep^{r} Haustus.—Rep^{r} Pulv. ter die sumend.

Nov. 29th.—This morning, on waking, the pain across the forehead returned, and there was a disposition to drowsiness. His speech is indistinct and somewhat incoherent, and his pulse is increased in frequency. His tongue is moist and whitish, and there is some moisture on the skin generally. He has evidently a slight difficulty in adjusting the muscles of the face and mouth. The pupils contract and dilate. *He has the perfect use of all his limbs;* but, while the muscles are obedient to the will, *the integuments of the left side of the body, from the top of the head to the extremity of the toes, are absolutely insensible to the application of a pin, with which the skin has been punctured in several places, besides inserting it between the nail and flesh of the great toe.*

After shaving the crown of the head, a large blister was applied, and twenty leeches placed on the temples. The following draught was given every four hours—

℞. Misturæ Salinæ ℥ jss.; Vini Antim. Tart. ʒ j.; Magn. Sulph. ʒ ss. M.

He took these pills at night—

℞. Hydrarg. Submuriat., Pil. Aloetic. comp. āā gr. v. M. fiant pil. ij.—The powders are omitted.

30th.—The drowsiness has gone off, and his speech is improved: the pulse is at eighty-four; the bowels are loose. The pain of the head is removed, and there is no incoherence. The tongue is more natural in appearance. The skin is insensible to feeling as yesterday.

December 1st.—A great improvement in his speech is evident this morning. The pulse is at seventy-two; the bowels are loose. The sensibility of the integuments seems to be partially restored. He sat up in the evening, and could walk perfectly well, though some numbness remained.

Dec. 14th, (eighteen days after his admission,) he was dismissed the hospital, having quickly regained his freedom of speech, and gradually the sensibility of the skin; which, however, was not perfectly restored at the period of his discharge from the hospital. But, on his return from leave of absence, during which he was enjoined to live low and quietly with his family, the sense of feeling seemed to be equal on both sides of the body, and he is doing his duty as usual.

CASE II.—J. Church, a trooper, formerly addicted to drinking, was admitted into the regimental hospital, March 12th, 1825. The day previous, he was attacked with sudden pain at the back of the head and across the forehead, inclining to the right side. *The forearm and foot of the same side were chiefly affected, and rendered entirely incapable of voluntary motion; but the skin was perfectly sensible all over the body.* Giddiness attended the commencement of the attack, and a sense of coldness was referred to the motionless limbs. The bowels are open, and the tongue is furred. There is a slight distortion of the muscles of the face on the right side, and the speech is slightly impeded. The pupils contract and dilate; the pulse is slow, soft, and equable; the evacuations are dark green.

℞. Hydrarg. Submuriat. gr. v.; Pil. Colocynth. comp. ℈ss. M. fiant pil. iij. nocte sumend.—℞. Aquæ Cinnamomi ℥ jss.; Magnesiæ Sulph. ʒ ij.; Træ. Cinnam. comp. ʒ jss. M. capiat sextis horis.—Subsequently five grains of the Bluepill were given every night, with the above draught by day.

March 21st.—He has continued to get gradually better, and felt immediate relief from purging. Some degree of motion is restored to the forearm and foot, and the sensibility of the skin has continued unimpaired.

A stimulating liniment is used, and the gentle use of the pulley is daily adopted.

Shortly afterwards he was made a Chelsea pensioner; but his limbs had only partly regained their motion.

CASE III.—G. Rhodes, a trooper, about thirty years of age, was admitted into the regimental hospital, February 13th, 1824. He was seized, while on guard, with giddiness and pain of the head, the night before his admission. His tongue is furred, and the bowels costive. *He can use his limbs, but the integuments of the left side are insensible.* His pulse is at ninety, and rather full.

About twenty ounces of blood were taken from the arm; and a brisk purge was administered; ten grains of Calomel and ten grains of James's Powder were given at night.

Feb. 14th.—Some pain of the head remains, but he is better upon the whole.

Fifteen leeches were applied to the temples.—℞. Misturæ Salinæ ℥ jss.; Vini Antim. Tart. ʒ j. M. capiat quartis horis.

15th.—The insensibility of the skin continues, with a sense of coldness.

℞. Hydrarg. Submuriat. cum Scam. ℈ss.; Pulv. Antimon. gr. v. M. fiant pil. iij. nocte maneque sumend.

18th.—Has been improving, but complains to-day of sickness and oppression at the epigastrium, which was relieved by an emetic; and his tongue, previously foul, became clean. The mixture is omitted. His evacuations became more natural under the use of the above and of the following pills. He has been free from any appearance of fever.

Instead of the last pills, the following were prescribed—℞. Pil. Hydrarg. gr. v.; Pulv. Rhei gr. v. M. fiant pil. iij. nocte sum. And the following draught was given three times a-day—℞. Infus. Gent. comp. ℥ jss.; Magnesiæ Sulph. ʒ jss. M.

The sensibility of the skin returned with the improvement of his general health.

Case IV.—G. Monkton, about twenty-eight years of age, a trooper, was admitted into the regimental hospital, December 2d, 1823. While on guard, he had been seized with loss of motion on the right side of the body. There was a slight numbness and cold sensation in the face, with a little difficulty in adjusting the fascial muscles; but the puncture of a pin was felt throughout the body. The tongue was white; the pulse small and quick; the bowels were open; the face and eyes had a yellow appearance; and the feces were not coloured. He had been standing as sentry during a remarkably severe frost.

He was immediately put into a hot bath, and took the following pills—℞. Pil. Colocynth. comp ℈ss.; Hydrarg. Submuriat. gr. v. M. fiant pil. iij.

Dec. 3.—Relieved, but the insensibility of the skin remains.

4th.—A dull pain exists at the occiput, and a disposition to giddiness on moving up the head. Bowels open, and the motions improved in colour. The tongue is less furred, and the pulse quiet.

The hot bath is repeated, and a few leeches previously applied to the temples.—Rep^{r} Pilulæ.

5th.—A sense of coldness has been complained of in the face, and the skin remains insensible. Bowels open, and stools less pale.

℞. Inf. Calumbæ ℥ jss.; Træ. Rhei ʒ ij.; Træ. Cinnam. comp. ʒ j. M. capiat ter die.—℞. Pil. Hydrargyri gr. x. noctibus sumend.

6th, 7th, 8th, 9th, 10th, and 11th.—He has decidedly gained ground the last few days: the yellowness of the face and eyes is going off, and his evacuations assume a proper colour and odour. Appetite improved; pulse quick; no pain or giddiness of the head; and the sensibility of the skin is returning. He can now adjust the muscles of the face and mouth; but a sense of numbness and coldness still remains.—Pergat.

15th.—He has been going on very well till to-day, when a degree of double vision was noticed, and the right iris was contracted. Bowels open.—Pergat.

17th.—The contraction of the iris is removed. He complains of dizziness. Bowels moderately open.

Twelve leeches were yesterday applied to the temples.

19th.—Dizziness continues, and uneasiness at the epigastrium.

An emetic was given, and he was relieved.—Pergat.

22d.—He has been going on well, and is always better when the bowels are loose. The sense of coldness, and insensibility of the right side of the face, are removed.

A strong liniment has been daily used; and the Pil. Hydrarg. sometimes given two or three times a-day, with the bitter aperient draughts.

On the 1st of March he went on leave of absence, and shortly after was allowed to purchase his discharge; and continues in good health, but was for some time disposed to be bilious.

Case V.—A gentleman in the cavalry, aged twenty-four, while in the South of France, during the autumn of 1825, fell sixteen feet into the dry bed of a river, and pitched first on the right hip. He found himself perfectly sensible and collected, and free from pain, but totally incapable of moving his lower limbs, or of standing when placed upright. He was conveyed home, and remained some time confined to his bed. During this period, *the skin over the nates and part of the loins, the perineum, the penis, and the upper part of the thighs, was rendered entirely insensible to feeling, so that a pin might be inserted without the least degree of sensation;* and, while this insensibility was coming on, he regained the power of moving his lower limbs by slow degrees, the skin of these never having lost their feeling. When after some time he was able to get out of bed, the flesh of the thighs, legs, and feet had wasted, and the limbs become smaller, with very limited powers of motion, by short dragging steps, and assisted by a stick. At first there was great inflammation of the glands in the groin, and about the urethra, with much pain extending along the perineum. Subsequently, these parts becoming insensible to feeling, he was scarcely conscious of the presence of the catheter. The urine, for some time after the accident, emitted a disagreeable odour, and was constantly thick and muddy. The feces came away unconsciously to the patient.

In March following, he returned to England. His gait was perceptibly awkward, and impeded by short and unfirm steps. The feet, legs, and thighs were less than usual in size; the skin over them was perfectly sensible; but, from below the small of the back to the top of the thighs, the skin, including that of the penis, was quite insensible to feeling. Erections of the penis came on frequently during sleep, and often accompanied by emission without sensation. When the bladder was full, the urine overflowed on the slightest irregular movement, and run out of the penis unconsciously to the patient. The feces continued in the large intestines, unless they were liquid, and he had no voluntary power to assist their expulsion, being obliged to take medicine to promote their passage.

In the course of last year, the limbs assumed a fuller condition, the step became bolder and more measured, and he could manage a horse. His powers of urinary retention and expulsion gradually returned, and the feces were properly passed; but the *insensibility of the integuments remains with little improvement to this day, a sense of numbness continuing in the skin of the perineum and nates;* while his locomotive powers, and development of flesh in the lower limbs, are as good as ever. The Ung. Antimon. Tart., electricity, and strong stimulating liniments, have been applied to the loins without any benefit; but his general health seems to have been improved by the shower-bath.

RUPTURED BLADDER.

CASE I. *Fracture of the Pelvis and Rupture of the Bladder.* Treated by Mr. BELL, at the MIDDLESEX HOSPITAL.

SEPTEMBER 22d, 1826.—James Simpson, aged twenty-three; whilst employed in undermining the foundation of a wall, it fell suddenly, and buried him in the ruins. He was dug out insensible, and in this state bled, and shortly afterwards was brought to the hospital. He is pale and cold, and his pulse is small; but he is now perfectly sensible. He complains of great pain in his back, across the loins, and down the thighs; but there is no paralysis of the lower extremities, to lead to the supposition that the spinal marrow is in any way injured. There are bruises on various parts of his body, and the right testicle is lying out of the scrotum.

Twelve M.—He has not made water since the morning; and, although now feeling the desire to do so, he is unable to pass a drop. The catheter was used, and when, with great difficulty, it was fairly introduced into the bladder, nothing but clots of coagulum escaped; the urethra, at the bulb and membranous part, felt rough, and here the point of the catheter seemed to be entangled:

Cupping glasses to the loins ad ℥ xvi. Fomentations to the belly and perineum.—Pulv. Jalapæ gr. xv.; Hydr. Subm. gr. v. statim.

Ten P.M.—No urine had passed, but apparently his sufferings were not more than those of one after any common injury. On introducing the catheter, coagula, with a small quantity of bloody fluid, were evacuated. Conceiving that the instrument was blocked up by coagulated blood, the bladder was injected; and but a small quantity of the warm water returned, which however was tinged with blood. Pulse small, and the countenance haggard.

23d.—Bowels have been freely evacuated, and a small quantity of bloody urine drawn off by the catheter. As the pain in the loins continued, eighteen leeches were applied. The pulse is still weak, and the skin cold and chilly. Since his first admission, he has expressed no urgent desire to make water, and drawing it off by the catheter does not give him much relief.

At noon, the pulse rising; and the pain in the abdomen becoming more acute, he was bled to faintness, (twenty-one ounces,) and an enema of house medicine and gruel administered. He vomited some matter of a stercoraceous appearance; the sickness continued, and at night he gradually sunk, apparently without any violent pain.

Dissection, fifteen hours after death.—The pelvis was found to have been fractured, the fracture running from the right pecten of the pubis through the thyroid foramen. Bloody fluid in the pelvis, into the cavity of which the catheter passed, the bladder being torn from the membranous part exactly where it joins the prostate. There was some fluid in the bladder, but this viscus was not distended. None of the vertebræ were injured, but a large ulcer was found in the ileum, near the caput coli, although in appearance, the individual had been perfectly healthy. There was a little increased vascularity of the intestines, showing the commencement of inflammation.

CASE II. *Rupture of the Bladder from a Blow.* Treated by MR. SHAW, at the MIDDLESEX HOSPITAL.

February 5th, 1827.—Thomas Doneghan, aged twenty-two. He had been drinking gin with his friends yesterday, and, in running a race with one of them, he stumbled, and struck the lower part of the belly against a post. From the violence of the blow, he was thrown backwards, and lay for some minutes insensible. He suffered violent pain during the whole day, and this morning he went to a surgeon, who passed a gum elastic catheter, but no urine flowed. He was bled, and very shortly afterwards came to the hospital. He stands half-doubled, his hands pressed upon the lower part of the belly, with an anxious countenance, and imploring assistance.

He complains of urgent pain across the loins and lower part of the abdomen, which is tense, but no well-defined tumor, like the distended bladder, is apparent. Has made no urine since yesterday at half-past one P.M. A cathether was passed, though not without great difficulty, owing to the strong contraction of the muscles in the perineum: here the instrument was literally held fast. About half a pint of bloody-coloured urine, with coagula, were drawn off; but little or no relief followed. The sensation given to the hand was not at all similar to what is felt when the catheter is in the bladder: it had too wide a range, and seemed to hitch against various irregularities.

Twelve leeches to the perineum, and a dose of Castor-oil and Laudanum.—Fomentations to the lower part of the belly and perineum.

Very shortly after being admitted, he vomited a quantity of greenish fluid. The pain continued unabated.

In the evening, he was bled to deliquium (ten ounces) from a large orifice; twelve leeches were applied to the abdomen. The catheter, with great difficulty, was introduced, and a small quantity of urine was drawn off, but with little coagulum.

6th.—Has passed a restless night, pain being constant; and he has continued vomiting the same greenish fluid. No urine has flowed naturally; neither have the bowels acted, although enemata have been administered. He does not feel any desire to evacuate his urine, and, on the catheter being introduced, none passed.

Infus. Rosæ ℥jss.; Mag. Sulph. ʒj.; Træ. Opii m. viij. secundis horis.—Twelve leeches to the abdomen.—Ext. Opii gr. jss. h. s.

7th.—Vomiting still continues. Complains of racking pain at the lower part of the belly, which the slightest pressure increases. Pulse is small, quick, and hard; the skin is hot, and the tongue furred and dry. He felt a desire to make water to-day, and the catheter was introduced, when two pints of clear-coloured urine flowed. Some degree of relief ensued, but the belly remained hard and distended. Nearly the same quantity of urine was drawn off in the evening.

Hydr. Sub. gr. ij.; Opii gr. ss. sextis horis.—Empl. Lyttæ abdomini.

Feb. 8th.—In the morning the catheter was introduced, and a pint of urine drawn off. His appearance is altered for the worse; the countenance is sunk, and his breathing is laborious. The vomiting continues, and is now decidedly stercoraceous. He lies with his knees drawn up; the abdomen is tense, and cannot bear the pressure of the bedclothes, and each cough or exertion causes him excruciating agony. The bowels, notwithstanding the administration of various enemata, have not been opened; neither has the bladder been relieved, excepting by the assistance of the catheter, which is passed morning and evening. Pulse is becoming small, and the tongue is remarkably clean. But a few drops of urine flowed by the catheter in the evening.

Calomel and Opium omitted in the evening.

9th.—No urine flowed by the catheter when introduced to-day. Pain of the abdomen less since the blister was applied. Pulse is weak, and the tongue is furring. There is no distinct tumor in the abdomen, it is swollen uniformly.

Vin. rubri ℥j. secunda q. q. hora.

He sunk rapidly, and died at eleven P.M.—Just before death he passed a motion, the only natural one he had since his admission.

Post-mortem examination.—Abdomen distended; omentum dark coloured and matted to the intestines, but no adhesion between it and the peritoneal lining of the abdominal muscles. Intestines dark coloured, matted together, and distended, so that the small are as large as the great intestines usually are: patches of coagulable lymph are effused upon their external coat, and the mucous lining is vascular; but no lesions are apparent, and they are quite empty of feces. There is a large collection of fluid in the pelvis, and, on passing a sound into the urethra, it enters the pelvis through a large rent in the left side of the bladder. The fluid is thick, and has the smell of urine. A portion of intestine, which has fallen down into the pelvis, and lies bathed in the urine, is soft, and appears to be gangrened. The rectum is coated with coagulable lymph, and flakes are floating in the fluid. The bladder is a little thickened, but is very partially contracted. There is no eversion of the inner coat. The whole cavity of the abdomen presents the appearance of active inflammation having taken place.

Remarks.—In cases of ruptured bladder (fortunately by no means of frequent occurrence,) the surgeon has to lament his want of power to afford relief, and it is with pain that he watches the progress of a case which must inevitably have a fatal termination.

The distended bladder receives a violent blow, and is burst; the urine is extravasated into the cavity of the pelvis, and causes inflammation of the peritoneum, and death. In a case related by Dr. CUSACK, in the second volume of the Dublin Hospital Reports, an opening was made into the abdomen, and a large quantity of perfectly transparent urine was evacuated: the patient was relieved for the time, but, as might be expected, the relief was not permanent, and he died on the eighth day. A case is also related in the Sepulchretum of BONETUS, where the abdomen was punctured, but the patient died.

In the first case, from the great and general shock to the system, the patient died before reaction had perfectly taken place, and before inflammation of the peritoneum had fairly commenced.

In the case of Donneghan, as rapid and as acute an inflammation of the intestines seemed to have been produced by the sudden effusion of the urine, as that caused by strangulation of a portion of gut. The intestinal tube being thus disturbed in its functions, the symptoms closely resembled those of ileus. It seemed extraordinary that, on the third day, a large quantity of water should have been drawn off by the catheter; but this was explained on dissection, for a new bladder or sac had been formed by the matting together of the peritoneal surfaces in the lower part of the abdomen. The catheter passed through the rent in the bladder into this sac, which had prevented the urine from being so generally effused as it had been before adhesion took place.

DISEASES OF THE URINARY ORGANS.

Cases of Disease in the Urinary Organs. Treated at St. George's Hospital, by Mr. Jeffreys.

Case I. *An Account of some unusual Morbid Appearances found in the Kidney of a Man, who died in* St. George's Hospital.

In the following case we have an example of the extent to which morbid alteration of structure may sometimes proceed, without any suspicion of its existence being excited, during life, in the mind either of the patient or his medical attendant. It is impossible to guess how long the disease in the kidney had existed; but it is to be presumed that the patient suffered no inconvenience from it as far as regarded the secretion of urine, since the experiments of physiologists have proved that one of the kidneys may be removed from a living animal with impunity.

John Cook, aged fifty-one, became an out-patient at St. George's Hospital, in the beginning of October, 1826, on account of a morbid enlargement of the left testicle, accompanied by a disturbed state of his general health, and anasarcous swellings of his lower extremities. He had been a schoolmaster, and attributed the origin of his complaint to a severe kick from a boy's foot, whom he was chastising about a year ago. This was followed by considerable swelling and inflammation of the part, for which he underwent the usual mode of treatment; but the testicle remained enlarged and indurated, and he then went through a long course of mercurial inunction, and took sarsaparilla, under the direction of the late Mr. Pearson.

At the time he became an out-patient at the hospital, the testicle was larger than a hen's egg, flattened at its sides, and hard and knotty; but the induration was chiefly confined to the epidydimis, which was painful, and irregular in its shape: the chord was not affected. Towards the end of November, he was attacked with diarrhœa, which proved obstinate and intractable; the anasarca of the leg increased; and, as his means of subsistence were unequal to the necessities of his situation, he was admitted an in-patient on the 13th of December. Nothing, however, checked the constant purging, and the anasarca spread over the whole body. On the 26th, he was seized with stupor and paralysis of the right side; and on the 3d of January he died.

His urine had been scanty and high coloured, but in other respects healthy; and he never complained of any particular pain or uneasiness about the loins.

Dissection.—No morbid appearances were observed in the head, except that the lateral ventricles of the brain contained altogether about half an ounce of water.

Serous effusion to some extent had taken place in each side of the thorax, but the viscera of these cavities were free from disease.

The following curious appearances were observed in the left kidney:—It had no vestige remaining of its natural structure; the pelvis and infundibula were entirely obliterated, and had assumed the appearance of a membrane without any cavity. The ureter, for two-thirds of its length, was also obliterated, and had become a mere cord. The body of the kidney, which was nearly of its natural size, was made up of a number of cysts, some of which were as large as a filbert. They had no communication with each other, and contained a peculiar kind of chalky looking matter, which was in some of the cysts nearly solid, and in others in a semi-fluid state, like soft mortar. Some of this substance was analysed by Dr. Prout, and found to consist of "phosphate of lime, with animal matter." The opposite kidney was somewhat larger than natural, but its structure appeared to be healthy.

The other viscera of the abdomen were in a sound state.

The left testicle was of the size of a hen's egg. When cut into, a multitude of small white granular bodies, apparently approaching to cartilaginous structure, were found interspersed amongst the tubuli testis. They were so numerous, that a good deal of glandular structure seemed to be completely destroyed. The epidydimis was considerably enlarged, and contained several small cysts full of a semi-fluid substance, of a yellow cheesy colour. This substance, when examined by Dr. Prout, was found to contain "little or no earthy matter, and to be merely a peculiar form of albumen." The right testicle was but little increased in size, and its glandular structure appeared to be in a healthy state; but the epidydimis was enlarged, and some cysts were formed in it containing a white, half-fluid substance.

The bladder was considerably dilated, and its coats were thinner than natural. The prostate gland was much larger than it ought to be, and contained a number of calculi imbedded in separate cysts. According to Dr. Prout's analysis, the composition of these substances was similar to that contained in the left testicle.

These specimens of morbid structure are preserved in Mr. Brodie's Museum in Great Windmill-street.

Case II. *Calculi and Ulceration in the Kidneys.*

One result of the long-continued residence of calculi in the kidney, especially if they are large and rough, is suppuration and ulceration of its glandular structure, denoted by increase of pain, irritation, and hectic, and the expulsion of pus, and occasionally blood, with the urine. The sufferings of the patient are often truly deplorable, and terminate only with his existence. Upon examination after death, as in the following instance, masses of calculous matter are found filling up the cavities of the gland, and more or less of its substance is destroyed by ulceration.

James M'Kenvey, a poor Irishman, was brought to St. George's Hospital, April 1st, 1824, in a very weak and exhausted condition, and apparently dying from the joint effects of disease and want. He complained of great pain in the back, and about the pubes and bladder, and was tormented with an incessant irritation and difficulty in making water, which was voided in a small quantity at a time, and loaded with blood and purulent matter. He had a brown, dry tongue; a quick, feeble pulse; and his bowels had not been relieved for some days.

It appeared, from the little information he was able to give of himself, that he had undergone the operation for stone about ten years before: since then he had been in the habit of passing small calculi from time to time by the urethra; and, about a fortnight before his admission, his urine had, for the first time, become tinged with blood, and within the last four days loaded with pus.

The house-surgeon gave him a dose of Castor-oil, and had him put into a warm bath; after which a catheter was introduced into the bladder, and about two ounces of exceedingly offensive purulent urine were drawn off. Plenty of nourishing food, with brandy, &c. was directed for him; but he continued to sink, and on the following day at noon he died.

On examining the body after death, both kidneys were found to be larger than natural; and, when cut into, the pelvis and infundibula of each were filled with masses of calculous matter, moulded to the size and shape of those cavities, and surrounded with purulent matter. These masses were of considerable size, and the pressure of their rough and uneven surfaces had excited extensive ulceration and destruction of the secreting structure in both kidneys. The ureters were slightly enlarged, and the coats of the bladder thicker than natural.

CASE III. *Stricture in the Urethra, with Swelling of the Prostate Gland, and a large Abscess between the Abdominal Muscles and the Peritoneum.*

Thomas Smith, fifty-seven years of age, was admitted into the hospital, April 5th, 1824, with a frequency and difficulty in making water. He was then in a state much resembling that of low fever; was restless and uneasy; had a dry, brown tongue; and was very low and weak. He said that, seventeen years ago, he was cured in this hospital of strictures in the urethra, under Sir EVERARD HOME; that he had been suffering for several weeks with his present complaints, and had been attended by a surgeon, who introduced the catheter almost daily, but without affording much relief to his symptoms, and had therefore advised him to come to the hospital.

At this time there was a large tumor situated under the abdominal muscles, which reached nearly from the pubes to the navel, was distinctly circumscribed, and very much resembled in its shape and appearance a dilated bladder; but it was hard and incompressible, giving to the fingers rather the feel of a solid structure, and very painful and tender when pressed or examined. Upon introducing a silver catheter into the urethra, it passed with perfect ease up to the rings, and appeared to go into the bladder; but only a little fetid blood, and no urine, flowed out, the instrument having slipped into a false passage. On examining with the finger in ano, it was ascertained that there was a considerable enlargement of the prostate gland. A flexible gum catheter was then passed, which, with a little management, entered the bladder, and three ounces of fetid urine were drawn off. But this was not followed by any relief from pain, nor by any diminution in the size of the tumor.

Twelve leeches were directed to be applied to the region of the pubes. He was put into the warm bath, and had fifteen grains of Dover's powder at bedtime; and the catheter was introduced three or four times a-day, or as often as he had an inclination to empty the bladder.

Under this treatment his urine became clear and natural; and, on one occasion, as much as three pints were drawn off, but without making the slightest alteration in the size or appearance of the swelling above the pubes. Sometimes the instrument would slip into the false passage, and, when this happened, nothing passed out but a small quantity of offensive blood, mixed with an oily kind of matter, not at all resembling pus. By degrees the tumor became more soft and flabby, and a kind of deep-seated indistinct fluctuation could be perceived in it. His debility and exhaustion increased daily; he fell into a stupid, comatose state; had a dry, brown tongue; a quick, feeble pulse; would take very little nourishment; and he sunk, and died on the 15th, ten days after his admission. During the last few days of his existence, not more than two ounces of urine were drawn off at a time.

When the body was examined the next day, there was found a large cyst or abscess in the cellular structure between the peritoneum and the muscles of the abdomen, which extended from behind the pubes nearly to the navel, and was capable of containing a pint of fluid. Its internal surface had a dark, greenish-black colour; and in its cavity was about half an ounce, or rather more, of offensive, ill-conditioned matter, mixed with blood, like that already described. The membranous portion of the urethra was thickened and contracted, and in the upper part of it, anterior to the stricture, there was a false opening, or passage, leading up between the neck of the bladder and the pubes, and communicating with the abscess. This rent had evidently been made by misdirected and too-forcible attempts to pass instruments into the bladder. The prostate gland was enlarged to three times its natural size, and the coats of the bladder were thicker than usual.

It is worthy of observation, that there had been no discharge from the urethra either of blood or pus, at least after his admission into the hospital. On a superficial examination, the tumor might have been readily mistaken for a distended bladder, which it closely resembled in shape and situation. But drawing off the urine made no alteration in its size or appearance; which, together with its apparent firmness of structure, and the oily kind of bloody discharge that escaped through the catheter whenever that instrument got into the false opening in the urethra, induced a suspicion of the tumor being of a fungoid character.

The case affords a striking lesson of the dangerous consequences that may arise from using force and violence in the attempt to introduce catheters and other instruments into the bladder. It was altogether inexcusable in this instance; for there was no difficulty in passing the catheter after its point had been conducted beyond the false opening in the urethra.

Case IV. *Diseased Prostate, with Dilatation of the Bladder, and Enlargement of its Muscular Fibres.*

—— Bricard, a feeble old man, seventy-four years of age, came under my care May 5th, 1824, on account of a difficulty in making water, which he said he had been troubled with for eight months, or more. He had an almost constant desire to void his urine, but could only evacuate a few ounces at a time. He had been some time in the hospital under the care of the physician, and the house surgeon had been in the habit of drawing off his water twice a-day, from one to three pints at a time. On examining the bladder with the finger in ano, the prostate gland was found to be considerably enlarged; but there was no difficulty in introducing a catheter into the bladder, and, ten minutes after he had made water by his own efforts, twenty-eight ounces more were drawn off by means of that instrument.

> He was ordered to go into the warm bath occasionally; to take five grains of the Extract of Conium, and as much of the Plummer's Pill every night at bed-time; and to have his water drawn off three times a-day.

But the quantity of urine which remained in the bladder increased, instead of diminishing. On one occasion thirty-two, and upon another forty-two, ounces were drawn off. A flexible gum catheter was therefore placed in the bladder, with a stopper fixed in it, by means of which the patient was enabled to relieve himself whenever the inclination to make water came on, and the bladder was thus kept comparatively empty.

Still the secretion of urine continued very abundant, and he did not recover the power of emptying the bladder by his own efforts. The continued residence of the catheter in the bladder at length began to occasion great pain; and, on the 27th of June, his water became tinged with blood. For these reasons the instrument was taken out, and passed four or five times in the twenty-four hours, instead of being left constantly in the bladder. This operation excited exquisite pain at the neck of that viscus: pus and mucus, as well as blood, came away with his urine. He grew daily more low and weak; and had a quick, feeble pulse, and a dry, parched tongue. His water also became very offensive, as well as loaded with mucus: the last drops were tinged with blood, and were voided with great pain at the neck of the bladder. The warm bath, Dover's Powder, Liquor Potassæ, Laudanum, &c. appeared to afford but little, and only transitory, relief. He continued gradually growing worse until the 7th of July, when the powers of life seemed to be quite overcome, and on the following morning he died.

The next day the body was examined. The coats of the bladder were preternaturally thickened, in some places to the extent of half an inch. Its muscular fibres were much larger and more distinct than usual, and between their fasciculi the inner coat was thrown into pouches large enough to receive the end of the finger. All the lobes of the prostate were considerably enlarged; and the middle lobe had two nipple-like processes projecting into the cavity of the bladder. The point of one of these was in a state of ulceration, which sufficiently accounted for all the pain the poor man had endured every time the catheter was passed, or whenever he made water; as well as for the discharge of blood. No morbid appearances were observed in the ureters or kidneys, except that the pelves of the latter were rather larger than usual.

CASE V. *Abscess in Perineo, with old Stricture in the Urethra.*

John Peglar, sixty years of age, was admitted into St. George's Hospital, April 7th, 1825, having a large phlegmonous abscess in the perineum, and an œdematous swelling of the penis and scrotum, which had acquired the size of an ostrich's egg. A distinct fluctuation could be felt in the abscess, which filled up the whole of the perineum; and the skin over it was of a deep red colour: but that covering the penis and scrotum was paler, and the swelling had a firm, semi-pellucid appearance, without any feeling of crepitus or emphysema when examined. He was suffering great pain in these parts, especially in the perineum; had an anxious, distressed countenance; a great deal of fever; a dry, furred tongue; and a very quick, irregular pulse.

It appeared that he had been subject to bad strictures in the urethra for many years; that he had been in the habit of passing bougies for himself, and had at different times experienced very alarming attacks of retention of urine. His present symptoms, he said, came on five days before, with swelling and pain in the perineum, attended with rigors and much fever; but without any stoppage in his water, which, he assured me, had been voided daily in a stream up to the time of his admission.

I immediately made an incision with a scalpel through the whole extent of the abscess in perineo, and let out full three ounces of offensive pus and urine, much to the relief of the poor man's sufferings. He was then directed to have the parts well fomented; to take a dose of Castor-oil; to go into the warm hip-bath as soon as it could be got ready; and to have ten grains of Dover's powder at bedtime.

From the truly circumscribed character of the abscess, and the tumefaction of the penis and scrotum being entirely devoid of the boggy emphysematous feel which commonly attends extravasation of urine into those parts, I considered the swelling to arise merely from serous infiltration into the cellular structure, in consequence of the inflammatory action having extended itself from the perineum; and that it would all subside as soon as a free vent should be given to the contents of the abscess. I, therefore, refrained from making any scarifications through the skin of the penis and scrotum; and, as the opening made in the perineum was sufficient to allow of the ready discharge of any urine that might escape from the urethra, I determined on waiting until the inflammation and swelling of the parts should have subsided, before I attempted to pass any instrument into the bladder. In the evening, however, the house-surgeon introduced a small flexible gum catheter into the bladder, where he left it.

The man passed a tolerably comfortable night; and on the following day, April 8th, the swelling of the penis and scrotum, together with the febrile symptoms and pain, were greatly reduced, and he was in all respects much relieved. The catheter was therefore allowed to remain in the bladder; but it excited uneasiness in the urethra, and on the evening of the 10th the pain and irritation it occasioned were so great, that he could bear it no longer, and he took out the instrument. In the mean time, the wound in the perineum assumed a healing appearance, the swelling of the penis and scrotum continued to subside, and by the 13th that and the fever had entirely disappeared. He could now make water in a stream, and without much difficulty, through the urethra. Nevertheless, the wound did not completely heal: a fistulous sinus remained, through which a few drops of urine occasionally escaped. I endeavoured to remedy this by dilating the strictures, the chief of which was found at the membranous part of the canal, but could only succeed in getting a bougie or a flexible gum catheter, of less than the middle size, into the bladder, in consequence of the external orifice of the urethra being very much contracted from original malformation. When the catheter was left in the bladder, if it was only for an hour, irritation and dysury were sure to be brought on, and the urine was forced out by the wound and along the sides of the instrument. It was, therefore, only introduced every second or third day; and these effects did not follow when it was simply passed and withdrawn. Now and then the catheter would slip into a false passage; but, by giving it a particular curve, and passing it with a good deal of care, I was enabled in general to avoid this accident.

By degrees the size of the catheter was increased, and, towards the beginning of August, one above the middle size could be introduced with tolerable facility; and he made water with more freedom and comfort, and was able to retain it longer than for many years. Several days would now pass without any urine escaping by the fistula in the perineum. Still the sinus did not entirely close up, and a very small quantity of matter oozed from it and the urethra.

During his residence in the hospital, he had had three or four severe attacks of gout in the larger joints of both the upper and lower extremities, a disease to which he had been many years subject; and his health was beginning to suffer from the confinement and air of the house. On this account he begged to be made an out-patient, and he was discharged as such on the 17th of August, with directions to attend twice or three times a-week, to have the catheter passed. But he paid little attention to this injunction, having been in the habit, as has been stated, of passing bougies and other instruments for himself. He came two or three times to the hospital during the first fortnight; but after that I saw no more of him till the 15th of the following December, when he was readmitted under the care of Dr. Hewett, in a very reduced and exhausted state, labouring under chronic diarrhœa, cough, and profuse purulent expectoration. These symptoms gradually undermined the powers of his constitution, and he sunk, and died on the 4th of March following.

When readmitted, there was a small fistulous orifice still remaining in the perineum, just large enough to admit a pin: through this a few drops of urine occasionally passed when he made water, but he was able to void it in a tolerably free stream by the urethra, having continued to pass the bougie or catheter for himself since he quitted the hospital, although he had seldom been able to get it beyond the stricture at the membranous part. This was, however, sufficient to keep him comparatively comfortable in that respect; and he was allowed, at his particular desire, to go on in his own way, as far as regarded the management of his strictures.

The following appearances presented themselves at the examination of the body:—Almost universal adhesion of the right lung to the pleura costalis; large tubercles and vomicæ in the upper part of each lobe, and the branches of the bronchi full of pus. Upon the mucous membrane of the caput coli, and the great arch of the colon, were numerous ulcerations, irregular in shape, and varying in size from a large pin's head to a half-crown.

The bladder and penis were removed from the body, and the urethra laid open its whole extent. The meatus externus was much contracted from original malformation. At the membranous portion was a permanent stricture, through which a common probe could with difficulty be passed: in front of this was a false opening, which communicated with a cavity about half an inch in diameter, running backwards for about an inch and a half towards the neck of the bladder. This cavity had a smooth even surface, and at its posterior extremity, next the bladder, there was a small opening, which proved to be the termination of the fistulous sinus in the perineum. The bladder and prostate were not diseased.

Case VI. *Suppression of Urine, and Death, after a Blow on the Perineum.*

John Gay, about twenty-two years of age, on the evening of Sunday, 17th July, 1825, received a violent kick on the perineum from a man's foot. A profuse hemorrhage immediately took place from the urethra, and he nearly fainted from the excessive pain which the blow occasioned. On the following morning, the 18th, he was brought to the hospital, having been unable to make water since the accident, and suffering much uneasiness from the distention of his bladder. There was a good deal of discoloration about the perineum, from extravasation of blood; but very little swelling, and not so much tenderness as might have been expected. The house-surgeon passed a silver catheter into the bladder, and drew off a pint and half of urine, mixed with dark-coloured blood. The hemorrhage had previously ceased, and there was now only a slight oozing of blood from the urethra.

He was directed to have some house-physic; to keep the contused parts constantly wet with compresses soaked in cold spirit lotion; and a flexible gum catheter was placed in the bladder, in order to prevent any effusion of urine from taking place through the ruptured portion of the urethra.

In the evening, it was found that no water had been voided through the catheter, the eyes of it having been blocked up with coagulated blood; and there was a good deal of pain and distention about the bladder in consequence. The instrument was therefore taken out, and another introduced, and twelve ounces of urine drawn off.

July 19th.—The water had flowed freely through the catheter during the night; and this morning early he took a Senna draught, which operated well. In the last portions of urine voided to-day were a few drops of blood. He said he was free from pain; he had no fever, and there was scarcely any swelling in the perineum.

In the evening, he complained of pain in the head, and had made no water since the middle of the day; he had a dry, furred tongue, and a small, weak pulse. A fresh catheter was passed, but there was no urine found in the bladder, and only a few drops of blood came away.

He was ordered a draught with thirty drops of Laudanum and a drachm of Sp. Æther. Sulph. comp.

20th.—Had a restless night, but did not complain of pain. He had made no water, and was much in the same state as on the preceding evening. The catheter was again passed, but no urine was found in the bladder. There was no particular heat of skin nor thirst, nor urinous smell about his person, as is sometimes the case where the secretion of urine is suppressed.

He was directed to be put into the warm bath, and to take the following draught every two hours:—℞. Pulv. Ipecac. co. gr. v.; Potassæ Nitr. gr. x.; Pulv. Tragæ. co. ʒss.; Aquæ Piment. ℥jss.; Sp. Æth. Nitr. ʒj. M. fiat haustus.

In the evening he became comatose, and the skin over the whole body completely jaundiced; and on the following day, at eleven o'clock, he died. About two hours before he expired, the catheter was passed, and two ounces of dark-coloured offensive urine were drawn off.

At the examination of the body after death, the urethra was found to have been extensively ruptured between the bulb and the prostate gland; and the cellular structure surrounding that part, and in the perineum, was loaded with a profusion of dark-coloured coagulated blood, but without any admixture of pus or urine in it. The bladder was quite empty, and in a perfectly healthy state; nor could any disease be observed in the kidneys, or in any of the viscera of the abdomen. The gall-ducts were not obstructed.

In this case the suppression of urine probably depended on nervous sympathy, or consent, between the kidneys and the urethra. It came on at the expiration of nearly forty-eight hours after the receipt of the accident, at a time when every thing appeared to be going on in the most favourable way, and destroyed the patient at the termination of about forty hours.

A jaundiced state of the skin, such as made its appearance in this case, is not uncommon in persons who die of accidents, or after large operations. I have seen it occur in compound fractures, and after amputation.

ASCITES WITH PREGNANCY.

Case in which a Woman was successfully Tapped in the sixth Month of Pregnancy. By James Russell, Esq. Surgeon.

On the 26th of May, 1826, I visited Mrs. Kelly, a poor woman, labouring under ascites and general debility. According to her own account, she had advanced to the sixth month of utero gestation. The abdomen was distended to a very considerable size, and the legs were anasarcous; the rest of the body was much emaciated. Dyspnœa and constipation of the bowels were the symptoms which demanded relief;—I bled her, and prescribed a dose of Calomel and Jalap.

27th.—To-day, the symptoms are relieved, and she says that she feels tolerably easy.

June 8th.—My attendance has not been called for since the last report, until to-day. She now labours under dyspnœa, with pain and tension of the abdomen.

A vein was opened, and the blood allowed to flow till ease was procured. A dose of Calomel and Jalap was prescribed, and desired to be repeated thrice a-week.

19th.—Nothing worthy of remark has occurred since the last report. The dyspnœa and cough at present, however, are of so alarming a character, as to induce me to decide on tapping her.

20th.—The dyspnœa and cough are very severe; the pulse is quick and hard; the urine is scanty and high coloured; the labia pudendi are very much distended with serum. Her uneasiness is extreme, and she refers it to the extraordinary distention of the abdominal integuments. Her period of pregnancy is now nearly seven months. I introduced the trocar two inches below the umbilicus. When about eight quarts of the fluid had escaped, she manifested so much uneasiness as to induce me to check any further discharge, and to allow her to lie down. She recovered in a few minutes. Twenty-three quarts of fluid were drawn off. Several times during the operation, the tendency to syncope rendered it necessary for her to assume the horizontal posture.

Nine P.M.—Respiration easy; no cough; pulse ninety-four. She says that, two hours after the operation, she passed two pints of limpid urine.

21st, eleven A.M.—I found her sitting up in bed: she expresses herself to be considerably relieved. The tumefaction of the labia pudendi has subsided, and that of the legs is also much less. The respiration is natural. She made water four times in the course of the night, and not less than a pint each time. From eight o'clock this morning to the present hour, she has passed four pints and a half of limpid urine. The bowels are soluble.

Ten P.M.—Complains of pain in the back. Since my visit this morning, she has passed four pints of limpid urine.

22d.—Much in the same state as yesterday. She passed three pints of urine from ten o'clock last night to ten this morning. She told me to-day that, for a period of two months before I tapped her, she was in the habit of passing a few table-spoonfuls of urine only in the course of the twenty-four hours, during the whole of that period.

> I prescribed eight drops of the Tincture of Digitalis, to be taken three times a-day; and a dose of the Compound Jalap Powder thrice a-week; and desired her to live on a generous diet.

July 5th.—My attention has not been required since the last report. Her strength has been gradually improving; and to-day she has walked to my house, a distance of a mile from her own. She continued the Digitalis for three days, and then left it off, because it created nausea.

24th.—At four P.M. to-day, I was requested to visit Mrs. Kelly in the capacity of accoucheur, and was informed that the membranes had ruptured. At ten P.M. the child was born, and in ten minutes after the placenta was expelled. The infant was feeble and emaciated: it appeared to be about seven months old, but I thought that it could not survive more than a few days. The dropsical accumulation has again taken place. From the 5th of the month to the present date, this woman has been strong enough to attend to her usual occupation, which is that of a charwoman.

26th.—With the exception of dropsy, Mrs. Kelly is as well as she usually is after an accouchement. On examination, I cannot detect any indurated enlargement of the liver, or of any other viscus. She is thirty-two years of age, has had seven children, and has generally been considered to be a person of strong constitution. My friends, Mr. **Anderson**, of Wilmington-square, and Mr. **Hensleigh**, of Glocester-place, New-road, had seen this patient several times, and were present at the operation.

September 12th.—Mrs. Kelly called upon me to-day, to request that I would tap her once more. She told me that, a fortnight after her accouchement, she began to move about the house, and in a week afterwards to attend to her usual laborious occupation. Her child lived ten days.

22d.—Dyspnœa, cough, quick and hard pulse, render it necessary to let blood ad deliquium animi.

A dose of Calomel and Jalap was ordered.

25th.—The distressing symptoms have increased to an alarming degree, and her abdomen is so large as to render it almost impossible for her to move. A very considerable accumulation of the fluid has taken place since the 12th. I tapped her to-day, and drew off thirty quarts of fluid. During the operation, she was several times threatened with syncope: indeed, we thought it expedient to administer a little gin-and-water, and to allow her to lie down.

26th, two P.M.—All the distressing symptoms are relieved. She passed water three times in the course of the night, about a pint each time.

27th.—Continues as well as she was yesterday.

October 26th.—Circumstances have prevented my paying strict daily attention to this case, since the last report. To-day, she told me that, after I had discontinued my visits, she recovered her strength, and returned to her business; and that nothing particular in her case had since occurred. I perceived that the dropsy was once more forming, and that it would be necessary to tap her again. Necessity obliged her to go to another place of abode, and it is not likely that I shall have an opportunity of seeing her any more.

Remarks.—What practical inferences may be deduced from the knowledge and history of cases like this? First, the expediency of the operation; secondly, its safety. Its propriety is advocated by **Scarpa**, who observes, that "we should puncture the abdomen when ascites, in complication with pregnancy, threatens suffocation." "Cependant," says M. **Marc**, "si l'hydropsie qui complique la grossesse est assez considerable pour menacer la femme de suffocation, on ne doit pas différer de pratiquer la paracentèse." There are, moreover, several cases on record which corroborate the propriety of the same practice. In the case of Mrs. Kelly, her wretched condition in consequence of her inability to do any office for herself, her anxiety of mind, and the tendency to suffocation, strongly urged the necessity of the operation; and the good effects of it were so speedily obvious as to convince me that the most imminent danger had been prevented. The success of the operation is proved by the fact that a cure has been effected by it.

It appears that, in general, labour commences a short time after the operation. With regard to three of the cases with the history of which I am acquainted, in the first, the woman was delivered the night after she was tapped; in the second, three days after; in the third, seven days after. In the first case, the woman was six months gone with child; in the second, nine months; in the third, six months. The first case recovered, and had no return of ascites. The second case died of hemorrhage; the child lived. The third case recovered, and had no return of ascites; the woman was delivered of dead twins.

24, *Goulden-terrace, Islington; March* 1827.

BONY TUMOR IN THE STOMACH.

Case of a Bony Tumor obstructing the Pylorus. By JOHN WEBSTER, M.D. Physician to the ST. GEORGE's and ST. JAMES's DISPENSARY.

IT is remarked by pathologists, that bony concretions in the stomach or intestines are of exceedingly rare occurrence. Dr. BAILLIE has once or twice observed osseous matter formed upon the surface of the mucous membrane of the gut, but never in the stomach. Fungous tumors growing from narrow pedicles attached to that viscus, and so near to the pylorus as sometimes to obstruct even the passage of fluids into the duodenum, have occasionally been met with; but very few examples are recorded in which cartilaginous or bony substances have been found adhering to the stomach. As an instance of the latter, and of what is considered an unfrequent disease, the following case, terminating fatally from obstruction of the pylorus, is now communicated.

A gentleman, of rather a stout habit of body, and about sixty-two years of age, had for the most part enjoyed good health, with the exception of some common dyspeptic complaints, attended occasionally with costiveness, which, upon the supervention of a diarrhœa, were generally relieved. These attacks occurred at irregular intervals, but never assumed a severe character till last autumn; when, early one morning, after having the previous evening ate freely of damson-tart, he was seized with excruciating pain at the epigastrium, accompanied by slight sickness and an acceleration of pulse; the skin became warm, and there was thirst, great anxiety, with obstinately costive bowels.

These symptoms increasing in urgency, along with a sense of fulness and fluctuation at the epigastrium, Mr. NICHOLSON, of Davies-street, (who had now been sent for,) bled the patient from the arm, and gave repeated doses of purgative and saline medicines. He also directed a strong enema to be administered.

In the evening, I was requested to visit Mr. ——; when the symptoms were considerably increased, especially the pain, tension, and swelling at the epigastrium, which seemed to augment with the quantity of liquids swallowed. A large blister was applied to the stomach; Calomel and Colocynth, with Infusion of Senna and Epsom Salts, were prescribed, and another strong enema was repeated. Brandy and water was frequently given, as the patient began to sink; and it was intended to try Croton-oil, but no opportunity was afforded, for, after vomiting profusely, the patient died, about twenty-two hours from the commencement of the attack.

Next morning, Mr. Nicholson examined the body, in the presence of Mr. Barrow and myself. On opening the stomach, which was much distended with the fluids taken during the disease, a cartilaginous body, intermixed with numerous spiculæ of bone, nearly the size of a quart-bottle cork, was discovered firmly attached by one extremity to the coats of the stomach, close to the pylorus, into which the other projected like a stopper, thereby preventing any passage into the small intestines. The internal membrane of the stomach was slightly inflamed, as were the peritoneal and mucous coats, at several points of the duodenum and ileum. There were about three pounds of serum effused into the cavity of the abdomen.

If it had been possible accurately to ascertain during life that a mechanical obstruction, similar to the one now described, existed, recourse would naturally, in the first instance, have been had to an emetic, with a view to dislodge the tumor from its situation in the pylorus; but, as a condition like the present could not be anticipated, the treatment was therefore such as is usually employed in inflammatory affections of the bowels; the nature and extent of the remedies having been regulated according to the urgency of the symptoms. How these proved ineffectual, the post-mortem examination satisfactorily explains.

56, *Grosvenor-street; February*, 1827.

CRITICAL ANALYSES.

Quæ laudanda forent, et quæ culpanda, vicissim
Illa, prius, cretâ; mox hæc, carbone, *notamus*.—PERSIUS.

On the Treatment of the more Protracted Cases of Indigestion. By A. P. W. PHILIP, M.D. F.R.S. L. & E. *Being an Appendix to his Treatise on Indigestion.*—8vo. pp. 86. Thos. and Geo. Underwood, London, 1827.

THE title of this volume sufficiently shows its general object,—that of an Appendix to the work on Indigestion by the same author. The first paragraph which arrested our attention on perusing it was a notice of some animadversions on the opinions of Dr. W. PHILIP, by "two highly respectable physicians," who maintain that the distinctions drawn by our author, and consequently the principles of the treatment founded on them, are imaginary. The physicians alluded to are Dr. JAMES JOHNSON and Dr. PARIS; and, while we agree with them in the general estimate they have formed of the value of our author's doctrines, we are nevertheless willing to give him all the advantage which he can derive from pleading his own cause, which he does in the following words:—

"That at some period of indigestion the complaint, from having been a mere nervous affection, assumes an inflammatory character; that this tendency is the source of all the mischief which we sometimes observe in protracted cases; that the usual means do not relieve this state, but that it yields, in most cases, to very gentle means of a different description, are facts which, when once pointed out, I believe all who have frequent opportunities of treating the disease, who view its phenomena with accuracy, and have sufficient command of themselves to prevent the interference of preconceived opinions, cannot fail to observe; and in this opinion I am now supported by men of the greatest experience in our profession. It must therefore appear to me, that writers who do what in them lies to recall the former principles of treatment, as far as they have been superseded by what I believe to be more correct views, tend to do harm; and on this account, as well as in my own defence, I have thought it proper thus to state what I consider a sufficient reply to their observations.

"Dr. Paris, indeed, replies to himself; for he has been betrayed into contradiction in the most essential part of his subject. In the 240th and 241st pages of his Treatise, he does me the honour to say, 'I consider the train of reasoning by which Dr. Philip establishes the important fact, that long-continued irritation at length terminates in inflammation and organic derangement of the part affected, as constituting a very valuable part of his work.'

Yet, when I say that irritation of the digestive organs, surely inferior to no other, produces in its progress inflammatory tendency, and at length organic disease; and consequently that indigestion naturally divides itself into three stages, the stage of simple irritation, that of inflammatory tendency, and that of organic disease, he observes, in the 234th page, 'The arrangement is wholly artificial. Nature does not acknowledge it, nor will she submit to it!' The only thing difficult to account for is, that the disease should not sooner have been so divided." (P. 3—5.)

Now, with deference to Dr. W. Philip, we cannot perceive that there is any contradiction in this. It is a well-known pathological position, that long-continued disturbance of a part frequently gives rise to inflammation, and inflammation to disorganisation: but this is very different from the assertion, that indigestion "*naturally* divides itself into three stages," or that consumption of the lungs is caused "by long-continued disorder of the digestive organs."

When we first opened the volume, and found that our author thought it "equally due to the public and himself that some reply should be made," we must confess that we expected something more satisfactory than what we have met with. It is not enough to tell us, that he finds "nothing in their works but opinions brought in opposition to the facts" he adduces. This is merely begging the question. Suppose that phthisis pulmonalis does supervene upon indigestion. This is a simple *fact;* but it certainly is matter of *opinion* only that the previous indigestion has caused the subsequent pulmonary disease: it is a *post hoc ergo propter hoc* argument. We are satisfied that dyspeptic phthisis is a nonentity; and that the expression has been productive of serious evil, giving an idea of the disease which is theoretically incorrect and practically injurious.

The first practical discussion in the present Appendix relates to the Examination by Pressure on the regions of the Stomach and first Intestine. We are told that, while the pyloric region is always tender on pressure in the second stage of indigestion, that of the duodenum is only occasionally so. The part of the bowel, the examination of which is of most importance, is several inches below the pylorus, and about the same distance towards the right side from the centre of the body. The examination ought to be made in the erect position, as the viscera fall from the hand when the patient lies down. If pressure be made on both sides in corresponding situations, and with equal force, the left side will be represented as feeling "more free" than the right; and there is, besides, a sense of obstruction in the latter. A difference is also perceptible to the hand, the right side being fuller and firmer: this difference, Dr. W. Philip states, is not dependent on the circumstance of the liver being situated on this side. Now, when any decided difference between the two sides can thus be perceived, it is, according to our author, " always the effect of disease;" and he adds, that of late years he has regarded the degree of distention as the best measure of the extent to which the digestive organs are deranged.

" When the region of the pylorus is tender, we know that the second stage has commenced; that a general inflammatory tendency, greater or less in proportion to that tenderness, prevails in the system, the removal of which is necessary to recovery. When this tenderness has extended to the region of the duodenum, we know that the affection of the pylorus has extended to it; but this is not merely proportioned to the degree in which the digestive organs are deranged, but to that and the degree of inflammatory tendency in the particular constitution. The difficulty with which the duodenum empties itself, on the other hand, very accurately tells us the degree of languor which prevails in the digestive organs, which, compared with the other circumstances of the case, more or less regulates all our means; and so constant a symptom of protracted indigestion is morbid distention of the duodenum, that, without saying a single word to the patient, the physician may generally know, by laying his hand on the region of this intestine, even on the outside of the clothes, whether the case be recent or not." (P. 12.)

When the duodenum is thus habitually loaded, no ordinary cathartic gives relief, and it is only to be permanently cured by such means as produce healthy bile. Sometimes, though but rarely, the tenderness (not pain) is greatest on the left side; and, except when this has been of a transitory character, passing off in a few days, our author has always found it prove obstinate. This form of the disease depends upon different causes in different instances, but always upon one more unfavourable than that which gives rise to tenderness in the polyrus or duodenum. It may be connected with enlargement of the spleen, or of the left lobe of the liver; but neither of these are looked upon as so common as " the state of the pylorus extending to other parts of the stomach." In some cases, the extension of the tenderness across the stomach depends upon disease of the pancreas.

The next subject brought under our notice is the state of the Organs of Waste in Indigestion. The derangement of these does not supervene till what our author calls the second stage of the disease, as up to this period the evil is confined to the stomach alone, or to this along with the organs immediately connected with it; while, in the second stage, the whole system participates in the morbid condition.

"It is not very uncommon, in the second stage of indigestion, for the organs of waste to be more debilitated than those of supply, and for the patient, from this cause, to get full and bloated. He acquires what, in common language, is called an unhealthy kind of fat. Part of what ought to be thrown off by the skin and other excretories is retained, and contributes not a little to the distressing feelings which the patient experiences. When this has happened to a considerable degree, the thinning is often rapid on the organs resuming their due functions; but, even when this is not the case, the patient almost always becomes thinner in the first part of his recovery. As it advances, however, and the organs of supply begin to resume their proper functions, he begins to regain flesh, and by degrees generally returns to the standard natural to him in health, and thus generally becomes fuller than he has been during the greater part of his complaint. The loss of flesh without the loss of strength in the early part of the treatment, I have found almost a certain sign of ultimate recovery." (P. 29.)

With regard to the passage just quoted, we would observe, that, although we can easily understand that a patient who has effusion into the cellular membrane may get thinner during his recovery, and in this way *apparently* lose flesh, yet we have never seen a case in which the *actual* loss of flesh was to be regarded as of favourable omen.

Our author pays much attention to the Pulse, and gives us the following theory of the *tightness* which he looks upon as so characteristic of this pathological condition:—"The tight pulse, indeed, which is always present in a greater or less degree at this period, constitutes itself a certain degree of feverishness, and, when considerable, is accompanied with all its essential symptoms. The vessels, in consequence of the continued irritation of the most sensible nerves of our frame, are excited to embrace the blood more strongly than in health: hence the tight pulse. Now this state, although a morbid one, tends for the present to support the strength; and we know, when in the extreme, will even give a preternatural degree of strength." (P. 31.)

As we cannot regard the above as any thing more than a mere hypothetical explanation, so neither can we give our assent to the following doctrine:—"Could we suddenly relieve the dyspeptic from the causes of irritation to which he has been so long subject, by at once removing his disease, he would feel a depression of strength till the nerves had accommodated themselves to the change. The tightened state of the circulation would be relaxed, and the effect of this would be increased by the secreting surfaces, which were bound up, beginning to separate more freely their various fluids, and also by the alimentary canal being less distended with flatulence and a collection of undigested food, which, however injurious, for the time gives tension, and therefore tone." (P. 32.)

With all our respect for our author, we cannot help thinking that he is rather too fond of paradoxes. Thus, we have the loss of flesh—a sign of recovery; the removal of disease—giving rise to depression; and a collection of undigested food—giving tone.

Another example of the same general principle, that curing the disease is not always the best way to restore our patient to health, is to be found at page 51:—"It sometimes, though rarely, happens that those who have long been accustomed to a certain degree of tightness in the pulse, cannot, even for years, be brought to bear one as soft as the perfectly healthy pulse; all the means which produce such a pulse occasioning in them a considerable degree of depression, often such as unfits them for all the active duties of life: yet they are capable of most of those duties, and, on the whole, enjoy a tolerable share of health, if some degree of tightness be allowed to remain in the pulse." (P. 51.)

In order to illustrate his idea still further, our author compares the condition above described to nervous fever, in which he says "there is no local weakness supporting the disease." We do not think the analogy happy: if by local *weakness* he mean *disease*, it is obviously a gratuitous assumption without proof, or rather an assumption in the face of proof; for dissection shows local disease in nineteen cases out of twenty, or ninety-nine out of an hundred. If by local weakness our author means something else than disease, then we profess not to understand the expression. Again, we hold that the analogy is in other respects against him; for, in fever, when the "tightened state of the circulation" is "relaxed," and when "the secreting surfaces, which were bound up, begin to separate more freely their various fluids," so far from expecting that the patient "would feel a depression of strength," we know by daily experience that the very reverse is the case, and that he feels increasing strength every hour from the date of these symptoms.

We are free to confess that we look up to Dr. W. Philip's theoretical opinions as the least valuable part of his work, and we shall therefore dwell no longer upon them at present, particularly as we are desirous of quoting at length his practical observations on the application of different medicines to the treatment of indigestion under its various forms, or stages.

Of the Nitrate of Potash in Indigestion.—Some saline medicine I consider essential in the second stage of indigestion, for reasons which have already been pointed out; and I have found none so beneficial as the nitrate of potash. I feel no hesitation in saying, on the one hand, that it enables us at this period to lessen the quantity of mercury; and, on the other, that increasing the quantity of the latter will by no means produce the good effect of combining it with this nitrate, to say nothing of the greater tendency of mercury to impair the strength.

The nitrate of potash is chiefly indicated when there is a tendency to an increase of heat in the evening, or during the night; and particularly to a burning in the hands and feet; and in such cases its good effects are both greatest and most quickly apparent; but they are not confined to such cases. When there is no increase of heat, and even when the temperature is below the healthy standard, if this be not the case in a considerable degree, I still find this medicine to add to the good effects of the alterative course, provided there is an evident tightness of pulse, when examined in the way pointed out in my Treatise on Indigestion: but in such cases it is generally proper to combine it with some warm medicine. Small doses of tincture of orange-peel, or the compound tincture of cardamoms, are those I have generally employed.

When I first made trial of this combination, I doubted whether the good effects of the salt would not be wholly counteracted by the warm medicines; but I soon found that this is by no means the case, and that the advantage derived from the former, as an alterative, is very little interfered with by the latter. Here, it is true, we do not obtain the cooling effect of the salt; it is combined with the tincture to prevent this effect. It is its effects on the vessels of the digestive organs, and on the extreme vessels in general, that is wanted, and which appears to be little, if at all, impaired by this addition.

It is generally, not always, as might be supposed, in those cases where the surface is most inclined to be cold, that the patient is most subject to depression of strength and spirits. Here warm medicines are doubly indicated, and the occasional use of ammonia, even in considerable doses, I have found very beneficial, and very little liable to interfere with the alterative effect of the nitrate. The effect of the latter, however, sometimes materially interferes with its effect. I have seen some in whom the languor of circulation and coldness of habit were such, that the chilling effect of the nitrate could not be counteracted by any stimulus it would be proper to employ. In such cases the nitrate must be abandoned. They are, however, comparatively rare.

In a still smaller number, from idiosyncrasy of constitution, even very small doses of this salt cannot be borne, apparently from the irritation of the stomach and bowels which they occasion; and I have met with cases in which none of the salts, into the composition of which potash enters, could be borne.

Although the cases in which it is necessary to abandon the nitrate of potash are rare, it is not very uncommon to be obliged to give it in small doses, five or six grains. It should never be given in such doses as very sensibly to add to the sense of depression. But such in general is the effect of this medicine in the second stage of indigestion, that it is not at all uncommon for patients, guided merely by their own feelings, to continue the use of it after they have gradually laid aside all others, and to declare that they derive from it a kind of relief which they never experienced from any other means. This has not been the observation of one or two, but of a large proportion of those who have used it. Yet nobody would think of giving nitrate of potash in the commencement of indigestion; and it is not even mentioned in the catalogue of stomachic medicines. Can any opinions be brought in opposition to these, and many similar facts, laid before the reader in my Treatise on Indigestion, tending to establish the same position,—that the nature of this disease is changed in its progress, and requires in its different stages very different, and even opposite plans of cure? Those who maintain such opinions, have a very imperfect knowledge of indigestion. Their knowledge of it has never gone beyond the first stage; from which their views of its nature, as well as plans of treatment, are derived; neither of which, a more careful observation will teach them, are applicable to the stage before us.

I have found the good effects of nitrate of potash sensibly increased, by combining with it a small quantity of mucilage, and a very slight anodyne. From six to twelve minims of tincture of hyoscyamus, or a combination of two or three drops of laudanum with four or five of wine of ipecacuanha, I have found the best. These doses will only appear trifling to those who have not attentively watched the symptoms of indigestion, in the more advanced stages of which the nerves, from repeated irritation, often acquire a sensibility which appears almost incredible. The gums are among the least sensible parts of our frame, but those who have been troubled with carious teeth know how exquisitely sensible they may be rendered by irritation of long continuance.

I have had occasion to observe that indigestion attends, and, I might have said, lays the foundation of most of the diseases of infancy; and it is remarked, in the Treatise to which this is an Appendix, that the duration of the first stage of indigestion is very various, the symptoms of the second stage showing themselves at various periods in different cases. In children, those of the second stage supervene very early, and the disease in them often appears to commence in the liver rather than the stomach, the latter suffering only secondarily, which is the reverse of what usually happens in the adult, at least in this country. It is the early supervention of the second stage which renders saline medicines so essential in their diseases.

If the disease has made any considerable progress in them, no course of mercurials, or any other means, will succeed well without medicines of this description; and I have found the nitrate of potash invaluable in most of their diseases. Their nerves, as well as vessels, are more irritable than those of the adult. It is on this account that in them the more advanced stages of indigestion supervene more readily, and are attended with more fever, and more apt to produce serious derangement. Continued irritation of the digestive organs, which in the adult produces a tight pulse, and often a tendency to increased heat, in them produces actual fever, which is only a greater degree of the same symptoms.

Such is the nature of what has been called the remitting fever of children, which is so apt, when neglected, to end in effusion on the brain, the part in children most liable to suffer from the general irritation kept up by a deranged state of the digestive organs. For once that the hydrocephalus of children arises from other causes, it arises twenty times from affections of these organs.

Of Tartarised Antimony in Indigestion.—Tartarised antimony is proper in many of the same cases in which nitrate of potash is so beneficial; but it is a medicine of very different properties, and the principles which regulate its employment are very different. It appears, from experiments which the College of Physicians did me the honour to publish in the last volume of their Transactions, that, of all the means that were tried, tartarised antimony had the greatest effect in suddenly exciting the action of the skin. It has comparatively little effect in exciting sensible perspiration; but, as appears from these experiments, as well as many other circumstances, it is not by sensible perspiration, but by a free state of the insensible action of the skin, that its vigour is indicated.

When the reader considers what has been said respecting the state of the skin in indigestion, he will be prepared for the good effect of such a medicine in the more protracted cases of this disease. I have had many patients who told me that they could always secure a good day by exciting sensible perspiration in the morning. This, for a reason just mentioned, and others stated in my Treatise, should not be our aim in indigestion; but it is more favourable than the arid state of the dyspeptic's skin, and affords temporary relief.

When the surface is dry and the tendency to feverish attacks considerable, and we have reason to believe that the disease is, in a great measure, supported by the general state of the secreting surfaces, the tartarised antimony, as might *a priori* be expected, is often a valuable medicine; and I was agreeably disappointed to find that doses so minute as neither to excite nausea nor any increased sense of debility, are often sufficient to produce a sensible improvement. A slight degree of nausea, if it be only occasional, I have found of little importance, and, contrary to what might be expected, it seldom even impairs the appetite. The antimonial has always been laid aside when it has appeared to increase the sense of sinking. The dose I have employed has generally been from the tenth to the eighth part of a grain, three or four times a-day. I have never seen the least bad effect from such doses, even when continued for months; and the patient, when it was laid aside, missing its good effects, has often requested to be allowed to resume it.

Analogous to what takes place in fever, when the tendency to increased heat is greater than usual, it has been found particularly serviceable, combined with the nitrate of potash. But of all the cases in which it was employed, it was found most beneficial in those where the dry skin and debilitated state of the other excretories had produced a determination of blood to the head, and it has been found necessary to continue it in such cases, after all other medicines had been laid aside.

Even in the early periods of the disease, great advantage is often derived from combining small doses of tartarised antimony with cathartics. It frequently has an operation on the bowels analogous to its effect on the skin, relaxing the surface, and thus rendering the action of cathartics more free. The same observation, indeed, applies more or less to all the secreting surfaces. In this respect its operation resembles that of mercury, but it produces its effects more quickly, and they are not, as in the case of the latter, apt to accumulate in the constitution, which makes it a less powerful medicine, but renders it safer, and thus, under certain circumstances, increases its utility. It may sometimes, with great advantage, be substituted for mercury, and very often combined with it, for the purpose of rendering less mercury necessary.

The beneficial effects of antimony in cutaneous affections, has long been acknowledged; when indigestion produces such affections, therefore, it is doubly indicated.

The operation of the colchicum is in many respects analogous to that of antimony; I have often used it, in very minute doses, for the purpose of relaxing the skin and softening the pulse in the advanced stages of indigestion. It was not among the medicines whose effects were compared with those of tartarised antimony, in the experiments just referred to; I cannot, therefore, say whether, on the whole, it may be equal to that medicine as a diaphoretic. In some respects it bears the same relation to antimony that this medicine does to mercury. Its effects are more sudden and more transitory; but it is capable of more violent effects than either of those medicines, and must always be used with caution, except in very minute doses.

The colchicum often has a peculiar effect in relieving the local inflammatory affections, so apt to supervene in protracted cases of indigestion, particularly those of the head and chest, and rheumatic pains of the muscles. I have often been disappointed in this effect of the colchicum before evacuations, and seen it act like a charm after them. When employed only with a view to relax the pulse and excretories, I have used it in extremely small doses; in rather larger doses, with a view to relieve cough and pain; but always lessened the dose, if it produced more than a very gentle action on the bowels, or a decided softness of the skin.

In the second stage of indigestion, whatever plan is adopted, much depends on the gentleness of the effect produced. I have long been convinced that this state is only to be removed by a slight effect regularly kept up for a considerable length of time. All powerful means, which are necessarily transitory, because they would soon destroy the patient if they were continued, fail to cure, and very often aggravate it.

In the first stage, when the first is unimpaired, and the habit of the disease feeble, powerful means will sometimes at once check its progress. In the second stage, where the opposites of these conditions obtain, this never happens. It is by the most gentle and frequently repeated impressions that the organs are solicited once more to resume their healthy action.

From what has just been said of the effects of the colchicum, compared with those of antimony, the reader will perceive that the former is, on the whole, less suited to the second stage of indigestion than the antimony; although its more speedy operation, its peculiar effect in relieving the inflammatory tendency, and particularly the power it sometimes evinces of allaying pain and cough, renders it preferable under certain circumstances.

The effect of tartarised antimony in severe nervous agitation, is very remarkable. Its power, even in allaying the symptoms of mania itself, is well known. I have found rather larger doses than those just mentioned, combined with moderate doses of hyoscyamus, by many degrees the most powerful means of allaying the more severe forms of nervous irritation which now and then appear in protracted cases of indigestion, not depending on any local irritation, the seat of which the patient can point out, but on the state induced by long continued irritation of the general source of nervous power.

Of Ammonia in Indigestion.—The effects of ammonia in certain states of indigestion are very valuable, and such as cannot be produced by any other means. We have no other means which so powerfully excite the nerves with so little disturbance to other parts. My attention was called to it above twenty years ago, by the essential benefit derived from very large doses of it in a case which had resisted all the usual means.

In some cases of indigestion, with the contracted pulse of the second stage, the vital fluids seem, as it were, to leave the surface, which is obstinately cold. The pulse in such cases is always very feeble, and the patient, for the most part, complains of great depression, hangs over the fire, and says that no exercise he can take has the effect of warming him. The nerves here are failing in one of their essential functions, that of supporting, by their action on the blood, the due degree of animal temperature; for in all such cases the temperature, measured by the thermometer, is actually, and sometimes considerably, below that of health. Here the ammonia is invaluable, being less apt, than any other stimulus of the same power with respect to the nerves, to excite the heart and blood-vessels; which, from the tendency of the disease, are inclined to a degree of excitement beyond that in due proportion to the state of the other powers.

The carbonate of ammonia may be taken in doses of from five to ten grains several times a-day with safety, and probably in larger doses; and it rarely fails, if given in the proper dose, with such exercise as the patient can bear, to diffuse warmth throughout the system. Nor is the benefit derived from it of a mere transitory nature. A state of chill tends not only to aggravate all the symptoms, but to confirm the disease. I have even known the digestion constantly deranged by the temperature of the room being so low as to cause a feeling of chilliness.

Ammonia is also a valuable medicine in most of the nervous affections which attend indigestion, even when the patient is not particularly chilly, provided the nerves are so far languid in the function of preserving the temperature as to allow of its being taken in considerable quantity without heating too much; an inconvenience which attends the free use of it in most cases of the second stage of the disease.

I have little doubt that, to the tendency of ammonia to excite the skin, we must in part ascribe its good effects in indigestion. It is probably chiefly to this effect that we ought to ascribe the advantage derived from some of its preparations, particularly the liquor ammoniæ acetatis, in the second stage of indigestion; in which I have repeatedly seen it eminently serviceable, when the ammonia itself heated too much. Nothing, in this stage of indigestion, more requires the attention of the physician than adapting the tendency of the treatment to heat or cool, to the circumstances of his patient. If we here attempt to lay down any general rule, we shall be led into error. The peculiar circumstances of the disease or constitution, for reasons which we cannot always detect, bear the one or other tendency better in one case than in another. The state of the pulse, and the effect of the means employed, are our best guides; and, on our forming a correct judgment in this respect, both the comfort of our patient and his final recovery greatly depend.

These observations are as applicable to diet as medicine. I have elsewhere pointed out that there are cases of the second stage of indigestion, in which an abstinence from animal food is proper: such cases, however, are rare. But, when the pulse is obstinately tight, abstaining from it two days in the week, I have sometimes found to produce an effect which it is impossible to procure by any other means. The patient has felt himself almost immediately more at ease. The bowels in particular have become less irritable, and more obedient to medicine; the skin softer, and the countenance much improved, and the ammonia, or other stimulants of the nervous system, better borne. The patient is often so pleased with the effect, that he thinks he has found a sovereign remedy for all his complaints. Let a dyspeptic, whose pulse has not acquired the same degree of tightness, and whose skin consequently is softer, follow the same plan, and it will do little more than add to the debility, and increase the flatulence both of the stomach and bowels. On the other hand, the stimulant, which the latter will tell you saves him from despair, given to the former, will hardly fail to increase all his sufferings; and yet, to a superficial observer, these two patients are much in the same state. They both complain of depression of mind and body, and those thousand nameless symptoms which attend irritation of the nerves of the stomach and bowels, rendered doubly sensible by their long-continued irritation.

Practical Observations on the Application of Lunar Caustic to Strictures in the Urethra; illustrated by Cases proving the Permanency of the Cure by that Treatment. To which are added, some Remarks on its Use in Strictures of the Œsophagus. By M. W. ANDREWS, Member of the Royal College of Surgeons, London. Second Edition.—8vo. pp. 249; with Plates. Callow and Wilson, London, 1827.

IT is exactly twenty years since this volume first appeared; and, although it was noticed soon after in this Journal, (vol. xviii.) yet the long period which has since elapsed places it before us rather as a new work, than as a new edition of an old one.

The author commences with some general remarks on stricture, and then more particularly alludes to the opinions of Sir E. HOME, as detailed in his third volume. He observes, that if the description given by this surgeon of the human urethra be correct, contrary to what anatomists have hitherto supposed, no muscular fibres, having a *circular* distribution, capable of giving to it a power of relaxation and contraction, are to be met with, but that its action is wholly dependent upon *longitudinal* fibres, these being short and interwoven with each other, thus surrounding the urethra. The surface of the inner membrane is represented as covered with numerous papillæ, which are the orifices of glands. Irritation of these causes enlargement, and subsequent exudation of coagulable lymph, forming an impediment to the transmission of the urine; in other words, *stricture*.

That microscopic observations, within certain limits, are of great interest and utility, cannot be denied; but that the method of prying into the ultimate conformation of structures by glasses magnifying many hundred times is either very useful or the results very trust-worthy, is matter of reasonable doubt. Setting aside the imagination of the microscopic physiologist, we know that the phenomena are apt to be modified to a very considerable extent by the manner in which the rays of light converge upon the lens; and that objects seen at certain angles are rendered more complicated and obscure than when viewed with less powerful magnifiers. Mr. Andrews throws out these hints as detracting from the confidence with which such researches ought to be received, and then proceeds more directly to comment upon the opinions of Sir Everard.

" Admitting that Sir Everard's statement of the longitudinal fibres is quite correct, it would perfectly accord with the spasmodic action to which the urethra is liable, and the contraction of those fibres would have precisely the same effect on the internal membrane in producing a stricture, as if their arrangement had been circular; for, when the muscular fibres contract in a longitudinal direction, the effect of their action would be to draw the two extremities of the urethra nearer to one another, and in so doing they must necessarily throw the internal membrane into folds, more or less at right angles to the course of the muscular fibres, thereby producing a stricture. But, if we are to look for the formation of permanent stricture from the exudation of coagulable lymph, as described by Sir Everard Home, we should certainly have strictures forming in every part of the canal indiscriminately, and more especially at that part which is the seat of gonorrhœal infection: we should also have coagulable lymph thrown out longitudinally as well as circularly; and moreover we should have no prospect of a permanent cure, or security against a return, by any mode of treatment, since every gonorrhœa, or other cause of violence to which those glands must be so continually exposed, would (agreeably to the known laws of inflammation) be followed with a like deposit of coagulable lymph, and thus produce a return of the complaint.

" The longitudinal, sulcated, or plaited appearance of the internal membrane, which is more or less distinctly seen upon laying open the urethra after death, is easily explained; the urethra being a flexible and distensible, but inelastic tube, surrounded by a loose cellular texture, is naturally disposed to fall into longitudinal plaits during its state of complete relaxation, independent of any muscular action; but it admits of perfect distention in a healthy urethra, during the passing of the urine.

" It is well known that there are certain parts of the canal which are particularly disposed to the formation of stricture; and one of the most usual seats of the disease is at a great distance from that part which is attacked by gonorrhœa,—viz. the membranous part of the urethra, which would of itself be a sufficient refutation of this new theory: and so usually are strictures to be met with in that situation, that I never recollect meeting with one anterior to it without having also found one there; but I have often had a case of single stricture, which has invariably been at that point, and never have met with one beyond it. This, then, warrants the conclusion that the original stricture is formed there, and that others anterior to it are the consequence of certain states of irritation in other parts of the canal, most probably induced by it, and not the consequence of coagulable lymph thrown out, as in the manner before described.

"Assuming, then, that the urethra is lined with a membrane in some respects similar to the membranous lining of other canals, it is found to differ from every other canal in the human body, in having to perform a double office, each requiring a state peculiar to itself; in the one it is in a state of relaxation, capable of great distention at the time the bladder expels the urine through it; in the other (viz. in the erect state of the penis,) it is elongated, and therefore necessarily lessened in its diameter, by which arrangement the semen, in the act of coition, is more readily thrown forward with that projectile force which is requisite to fulfil the intentions of nature.

"This power of elongation and relaxation is, therefore, evidently necessary for the due performance of its natural and healthy functions; but, if abused by their too-frequent repetition, a morbid state of the parts will be the consequence.

"When certain stimuli are applied, which have the power of producing spasm in any part of the canal, the diameter at that point is of necessity lessened during the continuance of the spasm. This, under ordinary circumstances, is only productive of temporary inconvenience, the parts recovering themselves as soon as the spasm subsides: but, if this spasmodic action be frequently reproduced, that portion of the canal which has been most acted on remains permanently contracted, thereby forming the disease in question.

"The disposition to contract or lessen the diameter of the canal, although it is to be met with throughout its whole length, is not found to be equally great in every part, but is more so at two different situations,—viz. immediately behind the bulb, and at four inches and a half from the external orifice, at which places it is naturally narrower than in any other part of the urethra." (P. 4—8.)

Our limits do not admit of our following the author through all the subjects which he investigates, and we therefore pass over the Causes and Symptoms of Stricture, in order to afford space for the practical parts, to which, in all our reviews, it will be observed, we devote the principal share of attention.

With regard to the Treatment of Stricture, Mr. Andrews regards it as of importance to keep in mind that it is a "local affection," and therefore to be removed only by local means; although, at the same time, as it frequently brings on constitutional symptoms of various kinds by sympathy, so these may be relieved by appropriate general remedies. To effect a cure, two modes of treating this complaint are adopted: one palliative, viz. the simple bougie; the other permanent, viz. that armed with caustic. The principal object of the present volume is to "advocate" the latter. Reasoning *a priori* upon the nature of the complaint, he thinks it is more rational to expect that, if by caustic we can destroy the diseased portion of the canal, we shall be more likely to produce lasting relief, than by merely dilating the parts by the common bougie. Perhaps, the principal objection to the method here recommended, is the pain to which it gives rise: this, in irritable constitutions, is frequently of the most acute nature. Where this is the case, the patient ought to be instructed to void his urine immediately after the application.

The objections to the caustic are fully stated, and the comparative advantages of the armed bougie are thus detailed:

> "It has been before stated, that the only rational way of explaining the principle on which the simple bougie can act, is by means of dilatation, for which purpose it must be conical in its shape.
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> "Bougies so constructed, and of such a size as the aperture of the strictures will admit, are to be employed daily, and in most instances ought to be allowed to remain in the urethra for an hour or two at each time they are passed, and their size gradually increased as the aperture becomes enlarged. This process must be continued, until a cylindrical bougie, or flexible gum catheter, of as large a size as the urethra will admit,* can be passed into the bladder. When this is effected, the permanent cure is not even then in all cases to be considered as completed: it will be necessary that the patient should either daily pass a bougie or have one passed for him, as far at least as seven inches, and this for a considerable time, subject to some variation, according as the stricture may or may not have been of long standing, or attended with circumstances of an aggravated nature, which may have brought it into a more or less contracted state; otherwise it will soon be liable to a return.
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> "It must be recollected that, when once a permanent stricture has been formed, the inner membrane of the urethra becoming elongated at that point, is not restored to its original healthy state by the use of the simple bougie; but, having only been dilated by

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* It is here presumed that the external orifice is not itself contracted.

the pressure of it, will readily fall again into contraction soon after the treatment is discontinued, for which a longer or shorter time will be required, depending on the state which the parts were in previous to the treatment, as well as the habits of the patient's life; and the resumption of the bougie will then again become necessary. But when the strictured part has been wholly destroyed by the action of the caustic, the urethra is left free from impediment, and the urine is able to distend it in passing, throughout its whole extent; under which circumstances, it must readily be admitted that the chances of a return are much diminished.

"That this is a fair presumption *a priori*, I think no unprejudiced person can deny; but, in all matters of controversy, facts should be adduced in support of the opinions advanced, I trust that the cases which I shall submit will be found fully to substantiate the proof.

"Much has been said against the caustic, and some have even gone so far as to insist that the cure by that treatment is not more permanent than by the other, and that it is often even productive of fresh obstructions, which are more obstinate and difficult to remove than the original ones; thus endeavouring to make it appear that the remedy is worse than the disease.

"But this is not the fact; and a reference to the only two cases in which I ever noticed a return will be sufficient to disprove the assertion, as in each instance every one of the strictures that returned were found to be at the same points where they had been originally met with." (P. 150—2.)

And again—

"The reason why caustic has disappointed so many practitioners, is, I think, that it is kept too long in contact with the stricture.

"Some persons are in the habit of keeping the caustic in the urethra for a minute, and some even a longer time: this is likely to be productive of an extensive slough, on the detachment of which hemorrhage will very probably ensue.

"We are told by Sir Everard Home, that, as soon as the effect of the caustic becomes sensible to the operator, which is known by the pulsation of the arteries felt between the finger and thumb which grasp the penis, it should be withdrawn. The length of time required for such an effect to take place must necessarily vary in different individuals, depending more especially on the state of the stricture; but the first application should be less than a minute.

"My own observations have for a long time led me to adopt a different rule of practice, by which I consider that I have avoided the risk of hemorrhage to any extent that might otherwise excite alarm. I never keep the caustic in contact with the strictured part, even in the most obstinate cases, more than a few seconds; but my general habit is to touch the stricture lightly, and withdraw the bougie immediately. By this mode many more applications, in a case of long standing, may be necessary, but the pain to the patient is considerably less, and the chances of hemorrhage, or any other unpleasant symptoms arising from it, must obviously be comparatively few.

"By attending to this, and taking care on all occasions that the bougie employed is as large as the external orifice will admit, and the surface of caustic as great as can be safely secured at its extremity, I have no hesitation in saying that a safe and permanent cure may almost always be depended upon, which, it must be universally admitted by every practitioner, cannot be effected by the simple bougie.

"The following cases will show the length of time that those patients have been free from strictures, after their removal by caustic.

Case I.—A gentleman applied to me in 1802, in consequence of a stricture in the urethra. He never had contracted a venereal gonorrhœa, and therefore he considered that the symptoms arose from some complaint in his bladder.

On passing a bougie, I found an obstruction at six inches and a half, to which I applied the caustic, and, after fourteen applications, the unarmed bougie passed on to the bladder.

The symptoms were all removed, the principal of which were a frequent inclination to make water, and involuntary emissions during sleep. In December 1823, twenty-one years after he was considered as cured, I had an opportunity of examining the canal, and found that the largest sized flexible gum catheter passed into the bladder with perfect ease; and, in October 1826, I again introduced the same sized catheter without the slightest impediment.

Case II.—In April 1803, conversing with a gentleman at Madeira on the subject of venereal complaints, he mentioned to me that he was extremely uneasy on account of a discharge from the urethra, which had continued on him from the time of his having contracted a gonorrhœa in August 1802.

For the cure of this, he had used injections nearly one month; at the expiration of that time, the infection was considered to be removed, and what remained was treated as a gleet, with Bals. Capaivæ, &c. &c.

From this account, I did not hesitate to tell him that the continuance of the discharge must be in consequence of a stricture, and, upon making a more minute inquiry into the case, I found that he was subject to painful erections, and involuntary emissions during sleep. My suspicions were confirmed by the passing of a bougie, which met with a stricture at six inches from the external orifice. I now proposed the use of the caustic, to which he readily consented, and on the 20th of April the first application was made. Four applications allowed the bougie to pass on to seven inches, but it required seventeen more before it could be passed into the bladder.

The discharge now completely disappeared, and he has since informed me, that, between the period of his contracting the gonorrhœa and the time of his speaking to me on the subject, he had a discharge of thick glairy mucus from his bladder, which came away mixed with the urine, but, when suffered to remain any time in a vessel, separated, and adhered to the sides of it.

This happened twice, the first time continuing on him nearly a month, the second only a few days; but each attack of it left him suddenly; and, as he did not consider this circumstance connected with the complaint in the urethra, he had purposely omitted taking any notice of it to me before.

Several months after, he contracted another gonorrhœa, of which he was cured, but no return of contraction occurred, as a bougie of the full size passed with ease.

In 1821, this gentleman came to England for some months; and, as he was very desirous of ascertaining whether there had been any disposition to a return of his complaint, he went to my residence at Watford, in order that I might have an opportunity of examining the canal; and I had the satisfaction of finding that a full-sized flexible gum catheter readily passed into the bladder. He then informed me that he had twice contracted a clap since I saw him, which had been cured by injections; so that, if the disposition to contraction still existed, there had been sufficient exciting causes for a return. This was eighteen years after its removal." (P. 161.)

The only other part of Mr. Andrews' work which we can notice relates to a very formidable disease, Stricture of the Œsophagus.

"Strictures in the œsophagus are far from being so common as in the urethra, for two very obvious reasons,—the size of the canal, and the use for which it is intended. However, they are more common than has been generally believed.

"It is only since the use of the lunar caustic has been so beneficially employed in strictures in the urethra, that an attempt has been made to relieve this complaint by the same application.

"Sir Everard Home has given some cases of it in his Treatise on Strictures, and the following have come under my care.

Case I.—I. A—, a Portuguese, gave the following history of his complaint. It first appeared in July 1803, with a considerable hoarseness, after having taken much exercise, and exposed himself suddenly to the cold; the hoarseness continued for several days, more or less troublesome. In October it increased so much, that he was with difficulty understood, accompanied with a dry and painful cough. From this period to February 1804, the cough increased, the expectoration became considerable, and occasionally his respiration was very difficult.

On the 24th of February, he experienced great difficulty in swallowing; and, on the 15th, could not swallow either solids or fluids. In this way he continued for eight days, receiving support from clysters. His medical attendant ordered an application of mercurial ointment and camphor, night and morning, to the outside of the throat.

In the course of eight days, the spasm was so far removed as to enable him to swallow liquids in very small quantities; but, in order to effect this, he was obliged to place his body in an almost horizontal posture, with his head rather elevated.

It was more than six weeks before he could get down any thing that was solid, and this so trifling in quantity, and with so much caution as to his position, that it could not be depended upon as nourishment.

His cough continued increasing; the expectoration was considerable, evidently purulent, and often mixed with blood.

In May 1804, I first saw him: he was in a very weak state, and much reduced. He could then only swallow liquids, and those when in an almost horizontal posture.

At this time I considered his state of health so precarious, that I did not venture to suggest any mode of relieving the throat, but attended wholly to his constitutional symptoms. Various medicines were ordered; and as in a few weeks he gained sufficient strength to be able to walk about the house, the complaint in his throat became an object of attention. I passed a bougie, previously curved, and found it met with a resistance in the œsophagus.

A bougie, armed with caustic, was passed on the following day, and, after eight applications at different intervals, he was enabled to swallow either fluids or solids, in a perfectly erect posture. In two weeks after this he caught cold, and the difficult deglutition again returned, though less violently than on the former occasion. Two applications of the caustic brought every thing right again, and he felt no further impediment to his swallowing till the day of his death, which was suddenly on the 16th of September.

The following were the appearances which I had an opportunity of examining after death. The œsophagus, when laid open from behind, showed the situation of the stricture, a small portion of which still remained; the projection of it appeared like a little shelf: all the other part of the canal was perfectly natural. The lungs were full of tubercles, some of which had suppurated.

Case II.—A young lady, about seventeen years of age, accidentally had a cherry-stone stick in her throat for a considerable time: it was at last brought up by the act of vomiting.

This happened about the year 1787, from which period she was liable to repeated spasmodic affections at that part of the œsophagus, during the act of swallowing. A very small piece of bread touching this part was frequently sufficient to bring it on, so that the food could neither be swallowed nor brought up for several seconds.

Within the last few years it had become very distressing, often occurring two or three times during a meal.

In 1804, I first ascertained that these symptoms were produced by a stricture in the œsophagus, as a bougie of a small size could not be passed into the stomach: I therefore applied a caustic bougie, previously curved to it, four or five different times, at the intervals of two or three days. The swallowing was evidently much improved by it; but after one application the throat inflamed and swelled, accompanied with very considerable pain, which extended to the Eustachian tube of the left side; the external ear was also much affected. It became necessary to apply a blister to relieve these symptoms; and, as she was then advanced in pregnancy, I thought it prudent to decline any further continuance of the treatment at that period; since which she has always been in a very delicate state of health, in consequence of a pulmonic affection, so that the treatment could never be continued regularly for a sufficient time to be productive of any permanent advantage; but, whenever the throat was most troublesome, and her other complaints would admit of the application of caustic, it always afforded relief.

Her pulmonic complaints at length getting the better of her constitution, I was anxious to examine the parts after death, and was much satisfied with their appearances, as I thought they afforded considerable information relative to the complaint and its treatment. What appeared of most consequence to notice was, the situation of the stricture, which was immediately behind the cricoid cartilage, at which part those that have been examined by Sir Everard Home were formed.

The œsophagus had no appearance of diseased structure in any other part, but was narrower in its whole length than it is usually found to be, owing to the great length of time that the stricture had been formed. The membrane immediately above the stricture was not at all injured by the application of the caustic. The aperture of the stricture was not larger than would admit of a crow's quill being passed through it, and the stricture, after the œsophagus had been slit open from behind, appeared to project from the inner membrane equally all round.

Case III.—A poor woman, about fifty years of age, applied to me in April 1805. Since August 1804, she had experienced great difficulty in swallowing any thing, either fluid or solid, and, within the last ten weeks, could get nothing into the stomach but what was perfectly fluid; any attempt to swallow solids produced vomiting.

On the 18th of April, I applied the caustic, and repeated it on the 19th and 20th. On the 21st, I passed an unarmed bougie into the stomach. On the 22d, 23d, and 25th, I passed a probang with great ease, and, as she swallowed tolerably well, I allowed her to return to her friends in the country.

In May following she came back to me, as she again found great difficulty in swallowing, the act often producing vomiting. On the 11th I applied the caustic, and repeated it on the 12th and 15th, after which she went into the country perfectly relieved.

Our notice of this work has consisted in pointing out the views and practice peculiar to the author, rather than in any attempt to analyse the whole. We can recommend it to our readers as containing much useful information, and many good cases: it is obviously the result of extensive and accurate observation, the only just balance in which to estimate the weight of opinions or the value of practice.

Observations on the Causes, Symptoms, and Treatment of Derangement of the Mind, founded on an extensive Moral and Medical Practice in the Treatment of Lunatics. By PAUL SLADE KNIGHT, M.D. formerly a principal Surgeon in the Royal Navy, many years Surgeon of the Lunatic Asylum for the County of Lancaster, &c. &c. *Together with the Particulars of the Sensations and Ideas of a Gentleman during his Mental Alienation, written by himself during his Convalescence.*—8vo. pp. 167. Longman and Co. London, 1827.

THERE are certain topics, the interest of which can never be exhausted; and, whether we approach the consideration of the subject of mental derangement as philanthropists or as physicians, we shall find it constantly presenting to our minds new trains of reflection. The insulated experience of individuals cannot alone ensure the advancement of our knowledge in so extensive a field of inquiry. The co-operation of all, whose opportunities furnish them with the means of investigating the various shades and peculiarities of mental disease, is essentially necessary; and we consider that the communication of the knowledge he obtains, is a moral obligation imposed upon every man to whose care is entrusted an asylum for the insane. Dr. KNIGHT need not, therefore, apprehend the charge of "temerity" for having offered the profession the result of his personal examination of the symptoms of insanity, in the cases of about seven hundred lunatics; "which examinations were carefully made, and very frequently repeated, during the progress of treatment." He assures us that he has studiously endeavoured to avoid all bias in favour of, or against, any mode of practice; and those who wish for a still further confirmation of the facts and inferences stated in the work, are referred to the records of the medical practice in the Lunatic Asylum for the County of Lancaster, which were carefully kept by Dr. Knight, and whence a large portion of the materials for constructing these practical observations have been obtained. The author observes, that he who devotes his talents to the investigation and treatment of mental diseases, "seems to be occupied in a pursuit of doubtful reputation, and to be placed in the lowest cast of the medical profession!" Upon this point we trust he is mistaken. We know of no such invidious distinctions.

Dr. Knight declares his firm conviction that, in every case of deranged intellect, the disease proceeds immediately from corporeal disorder; but yet he has not discovered, in his examinations of the bodies of lunatics, any morbid appearances that are not frequently met with in bodies where insanity had never been manifested. He thinks he has observed greater evidence of excessive vascular action in the brains of insane subjects, than would have remained, under the same system of depletory treatment, in the same subject, had he been sane, and died sane.* We infer, then, that the term "corporeal disorder," employed by the author, goes no further than to imply various functional derangements, with which he presumes the brain may sympathise.

From strong circumstantial evidence, it may be concluded that hereditary predisposition to insanity is the result of peculiarity of structure,—something in the machinery, with which the living principle acts, being defective.

The author draws a strong line of distinction between hereditary and non-hereditary insanity. "Adventitious circumstances sometimes concur, and produce insanity in persons previously, and subsequently, of sound intellect and healthy frames. If the predecessors of such persons have been free from insanity, I have not known a well-authenticated instance of the disorder being transmitted; and therefore I do not consider such event any well-grounded objection to an alliance with the individual: much less do I consider it a well-grounded objection to an alliance with the family." (P. 5.)

The only symptoms of insanity with which Dr. Knight is acquainted, "are a confusion in the intellect, with some degree of perception and consciousness; the confusion being frequently, in the early stage of the disorder, manifested more by actions than words." He employs the terms Insanity and Derangement of the Mind synonimously.

Dr. ESQUIROL observes, that, in mental derangement, the sense of delicacy is obliterated, and people of the finest previous feelings will deliver themselves up to the most indecent and culpable actions, without the consciousness of impropriety. If this observation is meant to apply to all cases of insanity, it is certainly incorrect. Dr. Knight, on the contrary, has usually met with much propriety and decency of deportment, and he would regard "such general licentiousness as indisputable evidence of bad, very bad moral management." He believes also "that, generally, in the insane the sexual passion is in a state of abeyance, more particularly in man."

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* The Appendix to "An Inquiry into the Nature and Origin of Mental Derangement," &c. by Dr. CRICHTON, contains some interesting particulars of the appearances discovered in the brains of lunatics.

Of the Moral Causes of Insanity.—Insanity, like many other diseases, may have for its origin a moral or a physical cause. The author is of opinion, however, that moral impulses very rarely produce insanity; and this is also the case with regard to religious feelings. Of nearly seven hundred cases of insanity that he has sedulously treated, he has only once satisfactorily ascertained that either a religious or a moral cause produced the disorder. Terror, however, claims particular notice: by its violent and sudden action, it frequently produces instantaneous insanity; "and," says Dr. K. "insanity from this cause is the only one resulting from the passions which I have satisfactorily ascertained." Whatever may have been the experience of our author, however, upon this point, it cannot be doubted that mental derangement is the very common consequence of powerful mental impressions, of various kinds.

Physical Causes and Treatment.—Dr. Knight has scarcely ever found insanity unaccompanied by one or more corporeal diseases. Neither the statements of the patient nor his friends are to be too implicitly relied on. A lunatic labouring under disease will frequently, when questioned by the physician, deny the existence of every symptom that could lead to its detection. The most careful and guarded examination on the part of the practitioner will consequently be required to enable him to arrive at the true state of the case.

Dr. Knight dwells particularly upon the subject of blood-letting, and quotes many of the most celebrated practitioners of the present day, to confirm his opinion that the use of the lancet is by no means generally demanded. In more than one instance, we have ourselves seen decided mischief arise from the injudicious, and not very uncommon, attempt to cure insanity by copious depletion. In one case, at this moment under our care, the patient, a man of strong health, and with all those appearances which would seem to indicate the propriety of blood-letting, invariably has complained, after the abstraction of blood, by cupping or otherwise, that the throbbing of his temples and pain of the head, of which he had previously complained, were decidedly aggravated. We would not hastily come to a conclusion upon limited experience, but we believe there is but little difference of opinion upon this important subject. Even in the high state of insanity, Dr. Knight "has never seen bleeding lessen the violence of the paroxysm, but, on the contrary, he has seen the excitement augmented by it."

Idiopathic Insanity.—Our author is of opinion that insanity is very rarely idiopathic, and, when it is, his experience leads him to conclude that it is manifested in very early life;—it is generally, if not always, incurable. Medicine has appeared to be of very equivocal use in idiopathic insanity, especially if conjoined with epilepsy. When this class of insanity is not accompanied by epilepsy, nor any marked bodily disorder, Dr. Knight is not aware of any rational mode of proceeding that has not moral treatment and the regulation of diet for its basis. "The moral treatment should be commenced by a mild and firm discipline; and, however long habits of insubordination, and its offspring, obstinacy, may have engendered an unruly and troublesome disposition, I have never failed, by steadily availing myself of that authority, which is generally accorded to a stranger placed in a superior station, to enforce such a degree of subordination as to preserve the patient in a tranquil and decorous course of demeanour, so as to impress a transient visitor with the belief that he was a rational and tranquil person." (P. 46.)

In order to counteract what appears to him to be the erroneous conclusions of some physicians, the author gives a few cases illustrative of the effects of certain medicines, under their respective denominations.

Sedatives.—Having noticed the confusion which has arisen from the application of this term to drugs of very opposite powers, Dr. Knight proceeds to the consideration of Digitalis, which he informs us "is, in the majority of cases, on its first administration, as decided a stimulus as brandy or geneva!" As this observation is in direct opposition to the opinions generally maintained upon the action of digitalis, we could have wished that the facts which gave rise to it in the mind of our author had been more particularly mentioned. Digitalis has always appeared to us to exert a directly sedative power. By the term sedative power, we imply a *diminution* of the action of the heart and arteries, without any *previous increase**.

"Digitalis, however, never fails, after a few days at least, to reduce the pulse either in force or number, and, in a few instances, both in number and force. Sometimes, however, the pulse loses in power, but gains in velocity, and, when this is the case, I have always found that the medicine was exerting a baneful influence on the constitution; and I earnestly request my junior medical brethren to be exceedingly watchful and cautious of producing this effect. When it is manifested, the vital powers are giving way; and, whilst we are watching for the sedative power of digitalis,—whilst we vainly expect or hope to find the pulse drop from 120 to a moderate number, our patient will sink into oblivion. I believe Dr. Withering has the honour of being the first to suggest the use of this powerful plant in cases of mental derangement; and, by a due attention to his directions, relative to the state of the fibre especially, the practitioner will very seldom be disappointed. I have uniformly found that this powerful drug exerted a beneficial effect in allaying the maniacal paroxysms and reducing irritability, exactly in proportion as it reduced the pulse, whatever might be the mental action, whether gay or melancholy." (P. 49.)

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* In this we differ from the Reviewer, although we cannot go so far as Dr Knight; who, in our opinion, has expressed himself too strongly.—Editor.

In a great number of instances, it has been necessary to give digitalis for two or three months successively, generally in small doses three times a-day. By this means the pulse has been kept steady, and the patients have been enabled to enjoy amusements, and to mingle peaceably with others. "I have," says Dr. K. "repeatedly omitted the medicine, and as certainly the insubordinate disposition, and restlessness, and a slight acceleration of the pulse, have followed. On resuming the medicine, the patient has peaceably and cheerfully returned to his usual avocations,—generally labour; and under this treatment has been very much improved in health, and ultimately restored to sanity. I am desirous to direct the particular attention of my reader to these facts, because I know some, (and among them a distinguished physiologist, whose private instructions it was my good fortune to receive,) imagine that digitalis allays excitement only by impairing the vital energy." (P. 52.)

Upon the subject of the administration of Opium to lunatics, M. Esquirol observes, that, "as maniacs sleep badly, opium and other sedatives have been employed, but they are now proscribed, by unanimous consent, as dangerous medicines." In his opinion, regimen and exercise are the only somniferous measures which can be safely recommended, and they are generally successful. It is certainly not the case that sedatives are "proscribed by unanimous consent" in the treatment of the insane in this country, although much caution is required in the administration of opium in such cases. Henbane, Hemlock, and Foxglove, are frequently found very serviceable in allaying irritability. Dr. Knight exhibits the henbane in large doses. He says, "I have also frequently given the Extract of Hyoscyamus, in doses of gr. v. quarta vel sexta quaque horâ, with the effect of tranquillising very restless lunatics; and I have for years been in the frequent practice of giving the same anodyne, in doses of twenty and thirty grains at bedtime, with the most complete success as to procuring rest: nor have I, in any one instance, witnessed any ill effect from its use." (P. 56.)

Purgatives and Emetics.—The author has rarely found that lunatics require more powerful medicines of this class than other people.

Alteratives, &c.—The blue-pill finds a very warm friend in our author. The following is his opinion of this medicine.

> "I beg to state, that, in a very great number of instances in which I have used it in old cases, (for I never have thought it a proper medicine for any recent case,) I have never once witnessed a bad effect; but, on the contrary, there is not a solitary instance where the medicine has not been of some benefit, and many cases where the recovery was chiefly, if not wholly, attributable to it. I have generally conjoined with it either the carbonate of soda, digitalis, or colombo, according as the corporeal ailments seemed to require these remedial means. I am not, however, a devotee to mercury. I should apprehend mischief from its use in most, perhaps in all, recent cases attended with excitement, except as an ingredient in an active purgative." (P. 58.)

> "*Of Baths.*—The shower bath frequently relieves the headache and irritability in old cases, when the skin is hot and dry. It may also be advantageously used to allay the irritability and restlessness of some epileptics. By its use I have frequently seen the fit postponed.
>
> "I think the shower bath is not in any other cases peculiarly beneficial.
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> "The tepid bath, at about 96° Fahrenheit, is very grateful to almost all lunatics, and there are very few cases in which it may not be advantageously used, at least once or twice a week. Besides its influence in promoting a healthy state of the skin, it washes, and secures cleanliness, in some degree at least; and on this account alone is of much value. The cold bath, plunging or otherwise, has appeared to me not so useful as the shower bath.
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> "*Circular Swing.*—As this machine must be considered more in relation to its physical than its moral action, I shall notice it in this place. It is a mean in the cure of insanity possessing immense power. A patient subjected to its action is speedily affected with giddiness and sickness, and the peristaltic motion of the whole alimentary canal seems to be excited, and in some instances to such degree that the patient vomits, and passes feces in rapid succession and great abundance, along with his urine. I have found the circular swing extremely beneficial in obstinate constipation, and in dyspeptic complaints accompanied with much acid." (P. 60.)

Of the Moral Treatment of the Insane.—This very important part of the subject is noticed at some length by the author. The following remarks deserve especial notice.

> "It is a great error to pretend to coincide in opinion with the lunatic, acknowledging his pretensions, confirming his opinions, and saying every thing that may be supposed to be pleasant and

soothing: fortunate, indeed, will be the result if the effect is not absolutely the reverse. The lunatic, for instance, who has thus been confirmed in his belief of his own sanity, at once becomes restless, irritable, and importunate, although he was previously tranquil and contented. I have known this apparently trivial error in moral management produce raging and ungovernable madness. To me it appears equally absurd, and I know it to be equally prejudicial, to reason (as it is called) or argue with the lunatic, for the purpose of convincing him of his hallucination. Many a well-meaning person, confiding in the cleverness of his reasoning faculty, may be seen combating the false perceptions of the peaceable lunatic; for it is with the peaceable only that these sage persons enter the lists: they never venture to engage with the turbulent or the excited, although frequently the saner of the two. The peaceable lunatic becomes at first a tranquil and willing auditor; till, finding his understanding insulted, by the evidence of his senses being either absolutely denied or boldly questioned, he becomes indignant at the barefaced assurance that would impose on him as truth that which the evidence of *his senses*, perhaps anxiously and repeatedly examined, tells him to be false. It will be found most prudent, most conducive to the patient's recovery, to permit the accuracy of these insane perceptions and morbid ideas to go unquestioned, and perfectly unheeded,—to carry the lunatic's attention to a very different subject,—and to fix it, as much as possible, on that which has no relation to the hallucination." (P. 70.)

Coercion in a dark room is considered generally sufficient even for very unruly lunatics. It is of the utmost importance that patients should be taught that resistance is useless; for insufficiency, as well as harshness and severity, begets a spirit of resistance, and has a direct tendency to excite furious mania. "It ought to be a law in the treatment of the insane, that all restraint is improper which is not imposed either to prevent the patient from injuring himself or others; and then the moral treatment which preceded the coercion should be jealously inquired into. For I fear it will be sometimes found, even in the best-regulated establishments, that the necessity for coercion has arisen out of some mismanagement in the prior moral treatment." (P. 74.)

Various amusements are pointed out proper to relieve the tedious hours of the patient labouring under insanity. Dr. Knight observes, however, "that the insane should never be encouraged to write." It is also recommended that lunatics should not be permitted to stroll about alone. If they are excited, they will take too violent exercise, and, if depressed, not enough; and the mind on these occasions seems peculiarly prone to indulge in its insane reveries.

Labour of some kinds should, if possible, be allotted to all lunatics. Some stated task should be imposed, which they should, if possible, be made to perform. Lunatics should not be permitted to idle away weeks, months, years, in the apartments or yards of their abodes. This is highly reprehensible and disgusting, and a disgrace to all concerned whenever it is permitted. The use of the common wheelbarrow is suggested as the best employment.

Religion.—The author would by no means debar the insane from the exercise of religious duties. We confess, however, we doubt the propriety of selecting "a dissenting clergyman, who was *generally well enough* to give a discourse that at least gratified many of his hearers." For such an office, a person should be chosen with whom the patients are not in the habit of living, and for whom they would feel more respect than for one of their companions in confinement. As far as we have seen of lunatics, we have generally observed among them a determined objection to the counsel or advice of each other. On examining sixteen letters published by the Committee of the New Bethlem in London for 1817, and received by the committee from various physicians and superintendents of Lunatic Asylums, fifteen speak favourably of the effects of religious instruction in their respective establishments; and in the other no religious instruction had been resorted to.

Music.—The author has never witnessed any bad effects from indulging the insane with this agreeable amusement. At the same time, he would not indiscriminately allow it to all lunatics. He has never ventured to try it on the excited and recent cases, nor does he recommend the experiment.

On the Method of securing Lunatics.—Several plates are given, representing different modes of confining patients. They are such as we believe are generally employed, and appear well adapted to secure the lunatic from inflicting injury upon himself or others.

Some tables of classification are introduced, by which the results of old and recent cases of insanity are shown.

The volume concludes with an interesting account of the various sensations felt by a person deprived of reason by a fever, with a description of the scenes in which he thought himself employed. This account is dedicated to Dr. Knight by the patient, on his recovery.

We can recommend the present work to those who require a concise and practical view of the subject on which it treats. The author has, we think judiciously, avoided all those metaphysical disquisitions which some of our writers on Mental

Derangement have been too fond of indulging in. He has been satisfied with the less imposing, but more useful, plan of stating the results of his own experience.

Throughout the work we observe the expression of a spirit of sympathy and benevolence for the unfortunate sufferings of those who were confided to his care, which would induce us to believe that Dr. Knight was peculiarly well fitted for the responsible situation he held for many years in an extensive lunatic asylum.

COLLECTANEA.

Floriferis ut apes in saltibus omnia libant,
Omnia nos, itidem, depascimur aurea dicta.

PHYSIOLOGY.

Cupping Glasses applied over Vaccine Punctures.—At some of the late meetings of the Academie Royale de Medecine, the subject of preventing the absorption of vaccine matter by means of cupping glasses, occupied the attention of the Society. M. **Itard** vaccinated three children, one of whom had previously been vaccinated; the second was doubtful; and the third had never had either small-pox or been vaccinated. In all, the punctures were made on the shoulders. They failed completely in the two first; but in the third there appeared, on the side which had not been covered with the cupping glass, five vaccine pustules, and on the other side one pustule only, which had been purposely left uncovered by the glasses.

M. **Bousquet** reported that he had been making similar experiments on vaccine pustules, and that the application of the cupping glasses in no wise arrested the development of the pustule. (*Revue Medicale.*)

Cephalo-Spinal Fluid.—Two things often puzzled us when examining the bodies of the dead,—the disproportion of size between the spinal marrow and the canal in which it is contained; and the fact that, in almost all cases, there was more or less serous effusion (as it is called) at the base of the skull, and in the vertebral canal. In a late sitting of the Royal Institute of Paris, M. **Magendie** read a Memoir on the Fluid found in the Cranial and Spinal Cavities of Man and Mammiferous Animals, to which fluid he has given the epithet *Cephalorachidien*. This eminent physiologist commences with an estimate of the total amount of this fluid, which he found to vary, in the adult and healthy subject, from two to five ounces. Among other uses, M. Magendie considers the cephalo-spinal fluid to serve the purpose of keeping, in a proper degree of plenitude, the cavities of the cranium and spine. In old age, the shrinking up of the brain and spinal marrow (not sufficiently observed by physiologists) causes a greater space for the accumulation of this fluid, and is thus inimical to the sustenance of life. In corroboration of this opinion, M. Magendie has observed that, in the old and emaciated females who die at the Salpetriere, the quantity of this cephalo-spinal fluid is very considerable. Numerous experiments on animals have demonstrated that this same liquid, when drained off artificially, is very quickly reproduced, like the humours of the eye. The effect which this artificial evacuation produces in animals, is a state of numbness and hebetude, which continues till the reproduction of the liquor. In two instances he found the evacuation induce a state of agitation and violence in the animals, which resembled hydrophobia, and lasted for three or four days. An artificial augmentation of the cephalo-rachidien liquor causes pressure on the brain and spinal marrow, and determines paralysis. The disease known by the name of spina bifida consists, according to M. Magendie, of a kind of hernia of the membranes which contain the said fluid. By pressure of the spina bifida, in children, he has produced the same phenomena which were exhibited by animals, where injections had been used to augment the quantum of this fluid. The temperature of the cerebro-spinal liquid was found to be under that of the blood, by some degrees. M. Magendie has produced in animals a tremor and a momentary paralysis, by drawing off this liquor, suffering it to cool, and then injecting again the same fluid. These symptoms appeared to last till the fluid had regained its natural temperature. If, after the evacuation of the fluid, the same was injected again of the natural temperature, no such symptoms occurred. The motion of the head on the trunk of the animal produced a wave or agitation of the fluid in the spine.—M. Magendie is of opinion that the contact of this fluid plays an important part in the development of electricity, and has undertaken a series of experiments, with the view of determining this point. All physiologists now agree in believing that a certain quantity of halitus, or watery vapour, in the ventricles of the brain is consistent with health. M. Magendie has proved, to his own satisfaction at least, that a communication exists naturally between the lateral and the other two ventricles of the brain, and between the fourth ventricle and sub-arachnoid cavity of the spine. This communication, he says, is established by an aperture between the two posterior cerebellic arteries, and is at least three lines in diameter. M. Magendie proposes to call this aperture " entrée des cavités du cerveau," or " entrée des ventricules cerebraux."

The communication being thus established between the ventricles of the brain and the spinal canal, M. Magendie avers that, in all morbific affections of the brain, as acute and chronic hydrocephalus, in which there is an undue dilatation of one or more ventricles, these "entrées," or communications, become very much enlarged. The experiment of pressure on a spina bifida affecting the head, proves the communication in the living body. The following experiment was made by M. Magendie:—He injected four ounces of ink, very gently, into the lower portion of the vertebral canal. This was sufficient to blacken, not only the whole surface of the brain, but the internal surfaces of all the ventricles. Whenever pressure was made on the spinal envelopes, a fresh quantity was pushed into the third ventricle.

In more than fifty bodies of people who had died without any cerebral affection, M. Magendie found from half an ounce to two ounces of fluid in the ventricles of the brain. Care should be taken, however, that the body be not placed in a position to favour the draining of the ventricular fluid into the spinal canal. This eminent physiologist is of opinion that, if the cephalo-rachidien liquor amount to more than two ounces, certain morbid phenomena will be the result, especially serous apoplexy. M. Magendie terminates his Memoir with these words:—" Is it not remarkable that those parts of the brain called by the old anatomists *valvule*, *aqueduct*, *bridge*, should have precisely the uses which their names import? It is thus that the *valve of Vieussens*, or valvula magna cerebelli, performs the office of a valve (*soupage*), and opposes the exit of fluid from the fourth ventricle. Never did a part better merit its name than the *aqueduct of Sylvius*, since, according to the experiments which I have made, this canal transports the fluid, sometimes from the ventricles to the spine, sometimes from the spine to the head. Finally, that part which has been termed a *pons* is, in fact, an arcade of medullary matter, placed over the current of fluid which traverses the aqueduct." (*Med. Chir. Review*, from *Revue Medicale.*)

PATHOLOGY.

Identity of the Vaccine and Varioloid Virus.—M. Kergaradec read a letter which he had received from M. Guillon, an old naval surgeon, vaccinator of the Canton of St. Pol de Leon. This surgeon having to oppose an epidemic small-pox, and having no vaccine matter, took from a girl, fifteen years old, who had been vaccinated, the virus of a varioloid pustule, on the fifth day of the eruption, and inoculated with it a child at the breast. What was his surprise to see ten *superb* vaccine pustules result from this inoculation! Wishing to verify so singular a fact, and fearful of allowing himself to be imposed upon by appearances, he inoculated forty-two children with the matter of these pustules arrived at their ninth day, and these all had the vaccine; these again furnished in their turn virus to inoculate one hundred others, and the operation, performed in the presence of the authorities of the place and several professional men, was followed by the same result. Lastly, M. Guillon, wishing to renew his experiment, inoculated, with the same success, ten other persons with the matter of varioloid pustules, from ten students of the College of St. Pol de Leon, who had been formerly vaccinated.

A later letter announces that numerous experiments confirm the identity of the varioloid and the vaccine virus. The first appears to have even more energy than the second; it acts as a preservative like the second, since individuals inoculated with it had with impunity exposed themselves to the contagion of small-pox. (*Revue Medicale.*)

Abdominal Tumor.—M. Lisfranc mentioned the case of a lady who had a moveable tumor in the belly, and which had so distended the integuments of the abdomen, that her extraordinary figure was the jest of every body. All the surgeons who were consulted dreaded any operation for her relief. One day this woman, in straining to pass a little urine, passed at the same time pieces of yellowish mucus, and the size of her belly sensibly subsided. But, during the discharge of these matters, there came on long-continued syncopes, and at short intervals. M. Lisfranc being called, attributed these syncopes to the void made in the abdomen, and he placed the patient in such a position that the inferior part of the pelvis was raised. The discharge ceased, and she regained her strength. However, from time to time the patient was placed so as to facilitate the discharge, and in a month the belly had its natural size. At present there can only be felt in the left flank a hard moveable tumor, the size of a fist, caused by the thickening of the cyst, which has for two years and a half remained in the same state, and continues to furnish by the bladder a small quantity of white matter. This lady has got fat, and enjoys in other respects good health. (*Ibid.*)

On two new Kinds of Urinary Gravel.—These new varieties of calculi were observed by M. Magendie. The first occurred with a man of rank, a lover of good eating, who, being in circumstances in which he gave way to his inclinations, thought it right to eat each morning a large plateful of sorrel. After following this plan for more than a year, severe pains were felt in the loins and ureters, and shortly after a calculus was voided, six or seven lines in length, and two in width. It was hard, had an orange colour, and, being analysed, was found to consist of oxalate of lime nearly pure. The oxalic acid introduced into the system by the sorrel was evidently the cause of this calculus, and an effectual remedy was found in change of diet.

The second kind of gravel was of much more uncertain origin. In this disease (as yet undescribed) the saline deposit of the urine assumed two forms,—being sometimes a fine white powder, mixed with a large quantity of small hairs, varying in length from a line to an inch or more; and sometimes, on the contrary, forming white pieces, of unequal and irregular form, having no great degree of consistency, and crushing between the fingers. The fragments did not, however, separate entirely, but adhered together by means of a multitude of small hairs like those described, which, being mixed with, made a part of the mass.

Maceration separates these hairs from both varieties of the hairy gravel, as they have been named. They are then found to differ but little from ordinary hair, except in being finer, and of a grey cinder colour. They are so numerous that the smallest fragments exhibit their extremities, and in certain instances the surface of the stone is visibly covered with them. The accompanying matter being analysed, was found to be phosphate of lime, united to a small quantity of phosphate of magnesia, and uric acid.

Each of these varieties has been observed by M. Magendie but once; the patient from whom the first kind came, rendered an enormous quantity daily. The phosphate of lime common to both varieties is, according to M. Magendie, a result of the excessive use of animal food: as to the origin of the hairs, he does not even form a conjecture. The formation of these calculi was readily prevented by prescribing an almost exclusive regimen of vegetable food and alkalis. (*Journal of Science,* from *Bull. Univ.*)

PRACTICAL MEDICINE.

Artemisia Vulgaris in Epilepsy.—The German practitioners have much confidence in this remedy in cases of Epilepsy and Catalepsy, and some cases lately recorded afford additional evidence of its power over these formidable and usually unmanageable complaints. It is recommended to be given in powder, in preference either to the decoction or infusion. **Grafe** has lately recorded two cases in which it was successfully administered. It is considered necessary to continue the remedy for some time after the cessation of the paroxysms. (*Journal für Chirurgie und Augenheilkunde.*)

Obesity.—A remarkable case of obesity is recorded in the last Number of **Grafe**'s Journal für Chirurgie, which was radically cured by bleeding, the administration of purgatives, abstinence from animal food, and the use of iodine. During the exhibition of the latter remedy, the patient rapidly decreased in size. It was given in doses of twenty drops of the tincture four times a-day. One grain of iodine dissolved in one drachm of alcohol, is the strength of the tincture employed by the German practitioners. (*Ibid.*)

Treatment of Pulmonary Complaints.—In the Clinique of M. le Professeur **Recamier**, the Hydrocyanic Acid has been tried in a dozen patients who showed symptoms of chronic pulmonary catarrh, or advanced phthisis. He began by two, three, or four drops of the acid in four ounces of a simple decoction, and the patient took a spoonful of this every two or three hours. The dose has never been greater than six drops. In three of the patients, no effects were visible: the different functions did not appear to be at all influenced by it. With the greater number, however, it caused warmth, with a sense of constriction at the throat, and heat of stomach; and in some cases colic, more or less severe. In one phthisical case it was necessary to discontinue it, as it caused violent diarrhœa. The urine and the cutaneous secretions did not appear changed by it; the circulation, the sensorial and intellectual functions, were not much influenced. In half of the patients who used the acid, the cough was decidedly diminished, as well as the dyspnœa and difficulty of expectorating. The sputa were not changed. The patients passed better nights. In one young man the cough ceased entirely, as well as the fever; but in the beginning of winter he had a relapse, and sunk under it. With these patients, soothing and other means had failed.

According to these experiments, it appears that the hydrocyanic acid acts chiefly on the digestive canal, and particularly when given in large doses. Indeed, in many of the cases where colic was produced, the medicine had been, by mistake, taken in too large doses.

These facts confirm the observations of M. J. **Bruchenel**, who, in recommending this acid in pulmonary catarrh, says it should not be used till the inflammatory disposition is subdued by depletion. One can easily imagine that the digestive canal then becomes less irritable, and can bear larger doses, —even, as he says, to the extent of six or seven drops, without any bad consequences.

Several cases of recent Hæmoptysis have been treated with Nitras Potassæ, either alone or in combination with conserve of roses. The dose was from a drachm to half an ounce. It caused neither colic nor diarrhœa; the patients complained only of the acrid taste and sense of heat in the throat. The urine was augmented in quantity; and the spitting of blood was first diminished, and then entirely stopped in a few days. In one patient with every symptom of incipient phthisis, the spitting ceased and reappeared several times successively. Although the dose was from the first half an ounce of the nitre, incorporated with a syrup, the patient felt no inconvenience from it. *(Revue Medicale.)*

Intermittents.—In the clinical practice at the Hôtel Dieu, M. Recamier is sometimes in the habit of using the following mixture to check the accession of a paroxysm of ague:—℞. Vini ʒiv.; Sulph. Quinæ gr. xij.; Syrupi Menthæ ℥v. *(Ibid.)*

Severe Case of Singultus.—Aleindon, a servant, ætatis forty, a native of Senegal, but who had lived from infancy in France, generally had good health; twelve years ago had had a severe attack of singultus, which was cured by the employment of Hoffman's Anodyne. On the 30th November, 1826, without any known cause, he was seized with shivering, which was soon accompanied with singultus and dyspnœa. The respiration became shorter, and the singultus almost constant. No fever.

1st, 2d, and 3d of December.—The symptoms much aggravated.

5th.—He was taken to the Hôtel Dieu. The difficulty of breathing was extreme.—Sinapisms were applied to the feet, without relief.

6th.—The following were the symptoms: Considerable dyspnœa, corresponding to the almost continual and violent hiccoughs. The patient could not lie down on either side; there was a little cough, accompanied with a trifling mucous expectoration; the pulsations of the heart were regular; the pulse full, and scarcely accelerated; the tongue moist and whitish.—A potion containing five drops of Hydrocyanic Acid, was given; and dry cupping to the epigastrium.

7th.—Breathing worse; the singultus more severe; face much changed; the superior extremities becoming cold; pulse more frequent.—An abundant bleeding was practised, with relief; an antispasmodic draught given.

8th.—Symptoms better, particularly the singultus.—Same treatment, except the bleeding; and a bandage was passed tightly round the body.

On the 10th, the patient continued to improve; but it was not till the 11th that the singultus quite left him, and with it the dyspnœa. It was, however, necessary to use several blisters before the organs of respiration were restored to a healthy state. *(Ibid.)*

Tartar Emetic.—M. Velpeau, in his account of the clinical practice at the Hospital de Perfectionnement, takes notice of the opinion of the Broussaists, that a gastro-enterite always precedes or accompanies erysipelas, and that therefore the emetic plan, so much recommended by Desault, is the worst possible; and that only blood-letting, and emollients internally, are to be used. Now, M. Velpeau is of opinion that, although it is sometimes good practice to bleed and apply leeches where there are symptoms of congestion or internal inflammation, yet that the other plan ought by no means to be abandoned when it is indicated. He relates several cases of decided benefit from the use of Tartar Emetic, given in doses to excite vomiting.

He also relates several cases of Rheumatism, where a trial was given to the Tartar Emetic, in doses of twenty and thirty grains. His opinion of the effects of this remedy, after witnessing thirty cases of disease in which it was used, is that it in none produced the least amelioration. In one case, in private practice, there appeared to result some benefit from its use.

Mme. H. suffered severe pain in the legs for fifteen days, in consequence of fatigue, when suddenly these parts swelled and became extremely painful; the pulse was strong and very frequent.—Bleeding to ten ounces.

Next morning, all her limbs were affected; swelling and redness of skin considerable, especially near the joints. The pain was insupportable.—Sixty leeches were applied.

Third day, her sufferings were increased; the loss of blood had produced much weakness; tongue much coated.—Twelve grains of Tartar Emetic were prescribed, in eight ounces of orange-flower water, to be taken by spoonfuls during twenty-four hours.

Fourth day, the patient was up and walking about her room: there remained only a feeling of being bruised in her limbs. She speedily recovered.

In some of the patients in the hospital, this remedy was sometimes carried to the extent of thirty, forty, and forty-five grains; and it must be confessed that, if it did no good, it never appeared to do any harm. The region of the stomach never became painful; the tongue remained healthy; appetite generally continued; and if, for the first day or two, nausea and looseness showed themselves, they ceased spontaneously, although the dose of the medicine was augmented. These facts, and many similar, prove at least that the destructive qualities which have been attributed to tartar emetic do not necessarily follow its exhibition even in large doses. (*Ibid.*)

MEDICAL JURISPRUDENCE.

Medico-legal Report of an Exhumation, made three Years after the Interment. By Dr. Eugene Delmas.—The following is taken from the Edinburgh Journal of Medical Science, being translated from the *Ephemerides Medicales of Montpellier.*

A Piedmontese, named Bonino, formerly a soldier, aged forty-six years, had retired to a village near Montpellier. He disappeared in 1823, and a report spread that he had gone to Spain; but soon after it was whispered that he had been assassinated by a girl with whom he lived, and a person named Diamont, who was known to have been long intimate with her, and who had married her nine months after the disappearance of Bonino. Two years passed away, however; after which, in 1826, the legal authorities being informed of the rumors spread abroad, caused a search, and a body was found in the garden of the suspected person. In the first place, it was necessary to ascertain if the body was that of Bonino, which could be recognised by one peculiar circumstance,—namely, a sixth finger on the right hand, and a sixth toe on the left foot. I was charged with the examination of the affair, and the following report is the result. Diamont and his wife were tried and condemned by the Court of Assizes at Montpellier, on the 26th August, 1826.

On the 30th April, 1826, at the request of the public administration, we went to the commune of Sussargues, to proceed to the exhumation of a dead body discovered in a garden. The earth being removed, we found, at the depth of eighteen inches, a human skeleton lying on its back. The head, placed towards the north, was slightly bent forward; the lower jaw was separated from the upper. The arms were crossed upon the breast, so that the right passed a little over the left. The ribs, still retaining the form of the thorax, were separated from the sternum, which we found lying on the opposite vertebræ. Some black hair, and a metal button, were imbedded in a moist earthy matter, which covered the anterior surface of the sternum. The vertebral column, unbroken, had retained its relations with the head and pelvis. The inferior extremities, stretched out, and on the same level as the trunk, followed the direction of the axis of the body, and inclined towards each other. The right foot, which alone we saw in its place, was still in the shoe, a little bent on the leg, and inclined to its outer edge; the left had been removed with the shoe, in which we found only a part of it.

The head, removed from its position, was dry in the frontal region, while the occipital region was still moist, and lubrified by a fatty matter, amongst which we found some black hair: attentively observed, it presented to us, at the right external orbitar angle, a deformity arising from an injury long anterior to death, since nature had produced a cure; we thought from this that there had been a cicatrix in this part. Another lesion of the bone existed on the left side of the coronal suture, but it appeared of ancient date. The left temporal bone, especially, fixed our attention: its squamous portion, almost separated from the parietal bone, was divided into three portions by three cracks, which proceeded from the circumference of the bone, and, before the external auditory canal, united to a fourth, which, turning round the base of the zygomatic process, terminated in the glenoid cavity. The form of this fracture, the soundness of the zygomatic arch and mastoid process, induced us to suppose that it was made with a blunt instrument of a small size. From the absence of any apparent operation of nature to effect a cure, from the separation of the osseous pieces, and the oozing which took place through the different points of the fracture, we think that it had taken place at a time very near death. We add even that the injuries we observed were the results of a violent blow, that must have brought on a cerebral commotion, which, without considering other accidents, would instantly deprive the individual of the use of his senses, and every means of defence.

The shoes in which we found the bones of the foot, some pieces of woollen cloth surrounding the vertebræ of the neck, metal and wooden buttons, a knife, of which the blade was folded in the handle, and found at the left side of the breast, some fragments of cloth and velvet, all these inclined us to believe that the body had been buried covered with a part, at least, of its clothes.

Although the time necessary for the complete decomposition of a dead body be very variable, and no exact rule can be established in respect to this, seeing that climate, moistness or dryness of soil, the greater or less depth of graves, circumstances relative to the state or temperament of individuals, all occasion much difference, we endeavoured, nevertheless, to determine how long the skeleton in question had been buried. The general opinion is that, in a temperate climate, when no peculiar circumstance hastes on or delays decomposition, it is completed in three or four years. In comparing the state in which we found the parts at the time of exhumation, with what has been said on this subject, we think we may advance that the body has been buried about three years and a half. We indeed remarked what some authors point out as taking place in the third period, that begins after the third year,—namely, the entire disappearance of gaseous products, the fetid odour replaced by an odour of mouldiness, and merely a remains of earthy, fatty, friable, brownish and black matter. The only soft parts which we found were vertebral ligaments, the composition of which, from being more nearly of the nature of bone, ought to be the last to disappear.

As neither time nor place permitted an attentive examination of the other parts of the skeleton, we put all the bones that we could find into a bag, to which the legal seal was applied.

On the 5th of May, we went to the judges' chamber, to continue the examination of the bones. We found all the vertebræ, the ribs, and bones of the pelvis, which were soon articulated. Wishing to determine to what sex the skeleton belonged, we examined these different parts. By the width of the passages being small compared to the depth of the pelvis, the outlet narrow, cordiform, and terminated in a point forwards, a formation that depends on the direction of the ischia, which in their descent converge much towards each other, by the oval and very elongated form of the obturator holes, we were induced to believe that it belonged to a man. We are confirmed in our opinion by the small separation of the descending rami of the pubis, which had their anterior face directed outwards; whilst in the female it is broad and flat. These circumstances were in relation with the length, the consistence, and development of the bones.

The sex being known, we endeavoured to discover the man's age. The complete development of the bones, that of the processes to which the muscles are attached, and also the jaws; the state of the teeth, the number of which was complete, with the exception of the fourth molar tooth of the right side of the upper jaw, which had been long out, as the alveolar cavity was ossified; and the adjoining teeth had not changed their direction, although they were not supported: these circumstances induced us to say that he had attained his fortieth year. According to the comparative table of Professor Sue, we determined that the height was about five feet five inches.

With the exception of some bones, the extremities were complete, and we articulated the right foot which we had preserved in the shoe. Two sesamoid bones, which are common enough, were the only additional ones that we found. The left foot having been removed in digging, some bones of it were lost. We found only the calcaneum, astragalus, scaphoid, and cuboid, the five metatarsal bones, and three phalanges: this prevented us from articulating it, and ascertaining if there was any thing peculiar. Having separately examined the bones that remained, we found the head of the fourth metatarsal rounded, extending outwards, and presenting a small articular surface, which might have been produced by an extra articulation; but, not having seen in what manner this bone was articulated with the first phalanx, we could not determine if there had been a sixth toe attached to it.

Except some small bones of the carpus, we found all those of the right hand. The fifth bone of the right metacarpus at once attracted our attention: shorter and thicker than that of the other hand, its extremity towards the phalanx separated into two parts, one of which, truly articular, smooth, narrow, rounded and prominent, had the direction of the axis of the bone; whilst the other, corresponding to the cubital edge, formed with it an angle of about eight degrees: not continued so far as the first, it was equally smooth, and presented an articular surface, which differed from it only in its less rounded form. Having tried to articulate the first phalanx of the little finger, it fitted exactly upon the first articular head, and presented upon the side corresponding to the second a depression, the obliquity of which was in relation with the direction that we have assigned to this second surface. This examination of the different parts of the fifth finger leaves no doubt of the nature of the anomaly which it presents: thus we think we may affirm, a sixth finger must necessarily have existed, although we did not find the bones that composed it. The left hand, of which we found all the bones except some bones of the carpus, presented no peculiarity.

Such are the results which we obtained; they conduct us to the following conclusions:

1st. The skeleton which we disinterred had been buried from three years to three years and a half, covered with its clothes.

2d. This skeleton belonged to a man about the age of forty to forty-five years, and of the height of five feet five inches.

3d. This man had six fingers on the right hand, the sixth should have been placed beside the little finger; and, if there existed an additional toe on the foot, which we cannot affirm, its place would be on the left foot, on the outside of the little toe.

4th. Death was occasioned by a violent blow given by a blunt instrument, which fractured the left temporal bone.

The value of anatomy, and the advantages derived from it every day by medicine generally, and especially by medical jurisprudence, cannot be denied. The fact just related is a new and remarkable proof of this. It was this science alone that produced evidence on the trial: by it the skeleton, reproduced with its deformities, placed the victim in presence of his assassins, and fully convinced their judges.

Great anomalies have been observed regarding supernumerary fingers: they have been sometimes seen supported by a sixth metacarpal bone, at other times resting on the fifth of these bones, or on the first phalanx of the little finger; sometimes also, but more rarely, affixed immediately to the radial edge. M. Boyer relates, that he has observed them forming a bifurcation upon the first phalanx of the thumb; and I have myself met with a fact of this nature. It has also been observed that additional fingers are rarely found on both hands. Thus, in some persons there may be on one hand a finger very complete, having its bones and muscles, that permit it to execute easy motions; whilst on the other an imperfect finger exists, but little developed, or perhaps only a mere appendage, that leaves no trace on the bone to which it adheres. The same anomalies exist with regard to additional toes.

The present case presents a new example of these aberrations of nature. Bonino had, on the right hand, a sixth finger, formed of one or several phalanges, and whose articulation with the fifth bone of the metacarpus presented

a pretty large surface; but it was on the left foot that a sixth toe was found, although the articular surface of the fifth metatarsal bone was less evident than that of the fifth of the metacarpus. Upon the right foot and left hand, on the contrary, there was nothing : in reality, there might have existed an excrescence during life, but, if so, it was not sufficiently developed for any traces of it to be recognised three years after death.

This fact seemed to me interesting, by the circumstances with which it was attended, as but few such are found in the annals of justice, and I thought it my duty to publish it. I do it with so much more confidence, as after having fulfilled, in this unfortunate affair, the so painful duties of a medical jurist, I had the good fortune to acquire, by the confession of the guilty persons, complete security of conscience, in the certainty that I had not been deceived.

SURGERY.

Gonorrhœa.—Every surgeon must have occasionally lamented the obstinacy of this disease, particularly in its chronic form, when the acute symptoms have passed by; and yet the term Gleet can scarcely be correctly applied. In such cases the Copaiba and Cubebs will frequently fail when given singly, although they may prove effectual if combined. In this country it is not so customary to unite these medicines as in Germany. In the last Number of GRAFE's Journal für Chirurgie, this combination is spoken of as frequently effectual, and in confirmation we may add the result of our own experience. In two or three cases of gonorrhœa, in which the discharge was profuse, but the pain trifling, which had continued for a considerable time, the patients were rapidly cured, after having taken the copaiba and cubebs separately without any effect, by the following mixture:—℞. Bals. Copaiv., Cubebæ, āā ℥ ss.; Pulv. Acaciæ ʒ iij.; Aq. Cinnam. ℥ viij. M. capiat coch. tria magna quater in die.—Sir ASTLEY COOPER frequently prescribes these medicines in this form.

Mode of Stopping Epistaxis.—A young man, nineteen years of age, bled from the nose two days so profusely, that he fainted several times. Mineral acids, ice to the nape of the neck, &c. were tried, but without stopping the flow of blood. Dr. BRUNNER was called in on the third day, and he blew up powdered gum arabic through a quill: the hemorrhage ceased directly. (HUFELAND's *Journal.*)

Tapping the Pericardium.—Mr. JOWETT, of Nottingham, gives the following account of this operation, which he recently performed.

"The following day she was so much worse in all respects, that it was evident she could not long survive, unless some relief were given. The face, as well as the extremities, had become œdematous—respiration was impossible in any other posture except the erect, and there was much accumulation of mucus in the trachea. The operation having been consented to, I performed it in the following manner, the same afternoon, in the presence of Dr. Manson the consulting physician, Mr. Robert Jowett, my brother and pupil, and the patient's friends. Having made a small incision with a lancet through the integuments, between the fifth and sixth cartilages, exactly half way between the sternal extremity of the sixth rib, and the middle of the ensiform cartilage, I thrust a trocar, which had its canula guarded, so that it could not penetrate further than one inch, directly through the thoracic parietes; as I withdrew the trocar, two or three drops of serum escaped, and before I could adapt the pipe of the syringe apparatus to the canula, a little air was sucked through it, during the act of inspiration. On attempting to work the syringe, no fluid was abstracted; imagining, therefore, that I had not punctured the bag, I again introduced the trocar, but with no better success. Certain of the correctness of my diagnosis, I then determined, with Dr. Manson's concurrence, to make another attempt higher up, where there could be no possibility of missing the pericardium, and I accordingly repeated the same process between the fourth and fifth cartilages, as near the sternum as there was space enough for the instrument to pass. Here the trocar seemed to push something before it, which it did not appear to penetrate, and although, here likewise, I twice introduced the instrument, still no fluid could be sucked out by the syringe.

I left the patient under the impression that I had failed in the operation—and my prognosis was "*death in the course of the night.*" Late in the evening, I found her quite as bad, *but no worse* than before.—On the following morning there was an evident amendment—the breathing was less laborious—she coughed more strongly—pulse 126, fullish—the right leg was less swelled, and she had made *two quarts* of urine in the preceding sixteen hours. In the course of that day she made five or six pints more water—the œdema of the lower extremities decreased rapidly, and the improvement was rapidly progressive in every other respect except the cough.

I now perceived, from weighing all these circumstances, that the operation had really been performed, so far as regarded the penetration of the pericardium by the trocar, but in consequence of the canula having been introduced but a little way, it either had never entered the bag, or else had entered so short a distance, as to slip out again immediately on the withdrawal of the trocar. Acting on this view, I renewed every exertion, and the improvement from that time, for eight succeeding days, was such as to warrant great expectations of ultimate success. Weakness was the most threatening circumstance, and that was attempted to be obviated by tonics, wine, and mild nutritious food.

On the 20th Feb. the sound on percussion was dull, only in a moderate-sized præcordial space, and the heart (examined by the stethoscope) had returned to its natural situation. Feb. 22, she felt better—"not so low nor so faint—rested well in the night—appetite improving—tongue clean—pulse quick—ankles a little swelled." She partook more freely of food. The next day, (Feb. 23,) being the tenth from the performance of the operation, my report ran thus—"has had much pain and soreness under the right ribs since last night, and has, twice, this morning vomited green slimy fluid—bowels rather costive. *Hepatis?*" She sunk exhausted in the course of the afternoon.

At my earnest request, seconded by that of Dr. Manson, whose kindness on this and other occasions call for my warmest acknowledgments, the friends permitted an examination of the body to be made, at which Mr. T. R. Tatham also assisted. The exact situations of the punctures were found to be as before described. The *diaphragm* was drawn very high up into the thorax, so that if a pointed instrument had then been introduced perpendicularly at the place of the lowest operation, it would have been punctured. The *pericardium* adhered externally to the anterior part of the left thoracic parietes, through the medium of a layer of firmish recent lymph; and internally it was found every where adherent to the surface of the heart and large vessels, by means of a similar layer of lymph, which varied much in quantity in different places, being in some parts from one-eighth to one-fourth of an inch thick. The adhesion was moderately firm, and the lymph of a reddish colour. As the cavity of the pericardium was destroyed by this state of things, there was of course no fluid remaining it. The pericardium proved to have been perforated at both the points of operation, and there were two holes at each place, so that every time the trocar was introduced, it had penetrated the bag. On the surface of the right ventricle, opposite the upper or last made puncture, there were two dark spots, which, on examination, proved to be drops of coagulated blood enveloped in the layers of lymph, and which had doubtless come from the wounds of the pericardium, as the surface of the heart was untouched. Both the ventricles and auricles were of the natural size. The muscular structure of the heart was rather flabby, and paler than natural. The edge of the mitral valve, on its auricular surface, was beset with a small ridge of semi-cartilaginous lymph, evidently of recent deposition, although firm and hard.

To this long account I may add, that I have since tried the experiment of puncturing the free portion of the pericardium on the dead body, and I have found, that the point of the trocar readily penetrates the sac; but as soon as the edge of the canula (which of course is always rather larger than the instrument it contains) comes in contact with it, it pushes the pericardium before it, and does not enter it, unless it be introduced to a considerable depth. This explains the supposed failure of the operation in the first instance.

I conclude by observing, that the following propositions appear to me fair practical deductions from the case:—

1st, That the operation of tapping the pericardium may be performed without injuring the heart, or endangering the life of the patient.

2nd, That the operation affords a probable chance of saving life, when all other means have failed.

3rd, That it is proper and justifiable under urgent circumstances. (*Medico-Chirurgical Review.*)

CHEMISTRY.

Acids discovered in Castor Oil.—MM. Bussy and Lecanu have obtained three new fatty acids from castor oil: one, which they call *ricinic acid*, is fusible at 72° Fahr.; another, termed *elaiodic acid*, is fluid at several degrees below 32°; and the third they have denominated *margaritic acid;* this crystallizes in fine scales, and is not fusible below 264°. These acids are volatile, more or less soluble in alcohol, and perfectly insoluble in water; and they form salts of very distinct characters, with several bases, and especially with magnesia and oxide of lead.

When castor oil is distilled in a retort in the common way, there are obtained a small quantity of gas, water, and acetic acid, a colourless crystallizable volatile oil, ricinic and elaiodic acids, which condense with the oil in the receiver, and a solid matter which remains in the retort. The quantities of acid and of the volatile oil are nearly equal, and form nearly a third of the oil employed; the solid matter constitutes nearly the remaining two-thirds.

This is a very singular substance: it is of a yellowish-white colour, full of cavities, and somewhat resembling the crumb of new bread. It is insoluble in water, alcohol, æther, the volatile and fixed oils. It is dissolved by the alkalies, with which it forms a kind of soap. It is not decomposed at a high temperature, inflames when exposed to an ignited body, and burns very readily without melting. When, instead of distilling castor oil, it is treated with a solution of potash or soda, it saponifies even more readily than olive oil, and there are formed ricinates, elaiodates, margaritates, and glycerin. No other product appears; the glycerin amounts to about a fifteenth part of the oil, the margaritic acid about one-thousandth, and the remainder is constituted of the other acids. These salts are very soluble in water, and act like ordinary soaps; the smallness of the quantity of margaritic acid will account for its not being found in the product of the distillation. (*Philosophical Magazine*, from *Journ. de Pharm.* Feb. 1827.)

MATERIA MEDICA.

On the Rhubarb of Commerce; by Mr. David Don.—It is well known that the plant which yields the rhubarb of commerce has been hitherto involved in much obscurity, and hence there have arisen many discordant opinions, both among botanists and pharmacologists, respecting the species of Rheum which affords this valuable medicinal root. They judged it rightly to be the produce of a species of Rheum, but of what particular species, without authentic materials, it was impossible for them to decide. Linnæus considered it at first as the produce of his Rheum rhabarbarum or undulatum, but he afterwards appears to have altered his opinion in favour of Rheum palmatum; while Pallas, who certainly had better opportunities of gaining correct information on the subject, regarded it as composed chiefly of the roots of Rheum undulatum and compactum. Mr. Sievers, an enterprising assistant of Professor Pallas, and well known by his interesting Letters on Siberia, published in the Nordische Beyträge, was sent by the Empress Catharine II. purposely to try to obtain the true rhubarb plant from its native country; and although, after travelling for seven years in the countries adjacent to that in which it is found, he was unable to effect the object of his mission, yet he obtained sufficient information to convince him that the plant was then unknown to botanists. But it was reserved for Dr. Wallich, the zealous superintendent of the Calcutta Botanic Garden, to set this long-agitated question at rest, by the transmission of seeds and dried specimens of the true rhubarb plant to Europe.

Last spring, Mr. Colebrooke received a quantity of the ripe seeds from Dr. Wallich, and presented a portion of them to Mr. Lambert, who has been so fortunate as to raise a number of plants of this valuable vegetable. The seeds were sown in pots, and by the aid of artificial heat, soon vegetated. The young seedlings were transplanted into separate pots filled with rich earth, and the pots were gradually changed as the plants increased in size. By this treatment, as might well be imagined, the young plants grew vigorously, and, at the end of autumn, the leaves were from fifteen inches to a foot in breadth, and the footstalks nine inches long, with half an inch of diameter. The plant, on examination, proved to be identical with my Rheum australe, from Gosaingsthan in the Himalaya Alps. I find Dr. Wallich calls it Rheum Emodi, a name which I should certainly have adopted, had I been aware of it before the publication of my work. The whole plant is thickly beset with numerous small, bristle-shaped, cartilaginous points, which give it a rough feel. The leaves are of a dull green, and the footstalks are red and deeply furrowed. The native samples I have seen appear to be smaller in all their parts, and the leaves, although flowering specimens, frequently not more than three or four inches broad; the footstalks four inches long, and slender; and the flowering stem not above two feet high. It is curious to observe how well this description accords with what Sievers has given us. The Rheum australe appears to be peculiar to the great table lands of central Asia, between the latitudes of 31° and 40°, where it is found to flourish at an elevation of 11,000 feet above the level of the sea; and there is little doubt, therefore, of its proving perfectly hardy in our own country. Large quantities of the root are annually collected for exportation in the Chinese provinces within the lofty range of the Himalaya. The best is that which comes by way of Russia, as greater care is taken in the selection; and on its arrival at Kiachta, within the Russian frontiers, the roots are all carefully examined, and the damaged pieces destroyed. This is the fine rhubarb of the shops, called improperly Turkey Rhubarb. (*Edinburgh New Philosophical Journal.*)

MISCELLANEOUS.

Poisoned Sugar-Plums.—It appears that the noxious substances used in colouring the sweetmeats known by the name of bonbons, and of which there is an immense consumption in France at the beginning of each year, has attracted the attention of the police; and, in consequence of discovering that the different colours were communicated by poisonous substances, great quantities have been destroyed. M. CHEVALIER states, that chromate of lead has been employed by some confectioners to give the yellow; the arsenite of copper, to give the beautiful green called Scheele's green; vermilion, or cinnabar in powder, for the red. (*Revue Medicale.*)

M. PIORRY's *Pleximetre.*—M. Piorry has announced that, by means of a small pallet of ivory placed on any part of the abdomen or thorax, he has been enabled to turn percussion to a much better account than has yet been done; the sound emitted by the portions thus covered by the ivory pallet, being much clearer and more indicative of the actual state of the parts underneath, than when these parts are stricken by the fingers in the usual way.

M. Piorry has made more than eighty experiments on the living and dead subject, healthy and diseased. By means of this intervention, sound may be elicited from the thorax, even when the integuments are œdematous. The extent of the pleuritic effusions may be ascertained with great exactness. Hepatisation, and also a tuberculated condition of the lungs can be more readily detected in this way than by simple percussion. But it is in the abdominal region that the pleximetre promises to be of most service. The extent which any solid organ, as the liver, occupies—that of tumours—watery effusions, &c. may be easily ascertained by the difference of sound on percussion of the tablet, instead of the naked parietes. Even the quantity of fluid in the stomach or intestines can be appreciated. The state of the uterus (when pregnant) can be also correctly estimated through the medium of the pleximetre.

If discoveries go on in this manner for half a century more, there will be little occasion for the ancient desideratum—a glass window in the breast—to see what is going on within. (*Medico-Chirurgical Review.*)

Peculiar Effects of Lightning.—The returning stroke of lightning is well known to be due to the restoration of the natural electric state, after it has been disturbed by induction. Thus if a person be brought into a highly electric and negative state by induction, from the approximation of a body highly charged positively, and then the latter be discharged by means having no connexion with the negatively electrified person, the negative state of the latter will be immediately destroyed, and an effect, in part analogous to that of a positive discharge of electricity, will be produced. Some of the most serious accidents which occur from lightning are supposed to be produced in this way, not by the mere disturbance of electricity in a person only, but of the electricity of those bodies with which the person may be in contact, and to which he accidentally serves as a conductor.

On the 24th of Sept. 1826, at the moment when the lightning struck the ground, at the farm of Gali, near Versailles, M. B—— was violently affected by a returning stroke, at the distance of half a league from the place. The following are the circumstances of the case:—A violent storm occurred at Versailles and the neighbouring parts, at half-past nine o'clock. M. B., aged seventy-two years, was passing the Rue Dauphine, at a little distance from the church of Notre Dame, when one of those whirlwinds so common in the neighbourhood of large buildings, obliged him to turn round. He was then close to the party-wall of the houses 13 and 14, his right side being at a small distance from it. A metal water-pipe was fixed up the front of the house in this place, bringing the rain from the roof to the level of the pavement. In this position M. B. felt a commotion, which he describes as if all the right side of his body was roughly thrown towards the left, feeling, at the same time, much oppression, and vertigo, resembling that of drunkenness. The immediate effects were, difficulty of motion in all the left side, and a disturbed respiration; and it was with much difficulty, and only by resting frequently, that M. B. could reach the house of a neighbouring friend. It was there observed, that the tongue was embarrassed in its motions as well as the left side, but by the aid of attention the agitation of the mind was calmed; the night passed moderately, and the next morning all was nearly in its ordinary state. In the evening, however, at the hour when the circumstance occurred, all the symptoms returned, and the same results occurred daily until the end of the week, when a physician was consulted. He immediately recognized the symptoms of compression on the brain and spinal marrow, from which had resulted an incomplete paralysis of the tongue, and the left arm and leg. This speedily gave way under the hands of the physician, but the periodica returns occurred until the cure was completed.

It would be difficult to prove the identity of the electric discharge which fired the farm of Gali, and struck M. B., but the latter cannot be attributed to a direct stroke; for, at the moment when it happened, the intervals between the lightning and thunder were such as to show that the storm was not over Versailles. By a coincidence of circumstances, M. Demonferrand, who describes the case, was in the house No. 15, the whole of the evening, in an apartment contiguous to the metal pipe which appears to have served as a conductor for the electricity; but neither he nor any other person in the house felt the slightest disturbance. In the opposite house was a person in a bad state of health, and therefore, perhaps, more sensible to electric changes; but neither did he experience any change in his feelings at the moment. (*Jour. of Science.*)

Sharp or Blunt Lancets in Vaccination.—Dr. Gregory insists on the employment of a lancet ever sharper than one fit for venesection—but we know that a gentleman here who vaccinates an immense number annually, prefers a *broken* lancet. If the lancet be broken off about one-twelfth of an inch from the point, it may be pushed against the cuticle so as to abrade it without the loss of any blood, (which is the most frequent cause of failure, as the blood washes off the virus,) and then some of the dissolved virus is placed and pressed on the scratched part: this practice rarely fails. We have used the scab after keeping it several months; and, if carefully watched, the vesicle produced will, in such cases, be found strictly conformable to the character which the true vaccina ought to possess. (*North American Med. Journ.*)

Prize Questions.—The Society of Medicine at Caen propose the following prize questions:

Is Miliary Fever a disease *sui generis*, or only the result of a visceral irritation, or some other pathological state?

What are the principal diseases of which it may be a symptom, a complication, or crisis; and what are the modifications it may communicate or receive?

Have seasons, climates, localities, or even therapeutic measures, any influence on its development or severity?

To trace the history of miliary fever, and the best curative and prophylactic treatment.—The answers to these questions must be supported by clinical observations and anatomical researches.

The prize to be a gold medal, value 200 francs.

The essays must be sent free of postage, before the 31st December, 1827, addressed to M. Lafossa, fils, secretary of the Society. (*Rev. Med.*)

Prize Questions.—The Society of Practical Medicine of Paris propose the following questions:—

Question for 1827.—To determine, in the present state of science, the nature, seat, and treatment of scrofula?

Question for 1828.—To determine the different cases of disease where the employment of cold is useful, and those where it is dangerous; and to particularise the different modes of applying it?

The essays to be addressed, post-free, to M. Pascales, secretary general, Rue Chartereine, No. 36, before the 1st of November of each year.—The prize for each question, 300 francs. (*Ibid.*)

INTELLIGENCE.

MONTHLY REPORT OF PREVALENT DISEASES.

Since our last Report we have met with several cases of Ague, and heard of others, as well in London as in the vicinity. We suspect that Intermittent Fever is becoming more frequent in the metropolis than it used to be formerly: if so, on what may this depend? Affections of the Head have likewise been rather more prevalent than usual: these have consisted chiefly of a febrile paroxysm with very severe headache, but not running on to regular fever, if met early by free purging and local bleeding. Several cases of Apoplexy, followed by hemiplegia, have presented themselves to our notice.

Use of Bark in Iritis.

SIR,—From a conviction that the following notice may be the means of affording relief to many sufferers, I am desirous that it should be made known as quickly and as extensively as possible: I therefore solicit you to give it a place in the first Number of your Journal.

I have the honour to be, Sir, your very obedient servant,

WM. WALLACE.

Gardner's Place, Dublin; March 1827.

Of the numerous sequelæ which the prevailing fever of this country exhibits during the state of convalescence, there are none more remarkable, nor more frequent, than a peculiar inflammation of both the deep-seated and superficial textures of the eye. This inflammation, from the symptoms which it presents, is entitled equally to the denomination of Iritis and Choroiditis. It being my intention to publish a full account of this ophthalmic disease, so soon as I shall have leisure to arrange my notes on the subject, I do not deem it necessary to enlarge now upon this point. Those to whom this affection may present itself will have no difficulty in distinguishing it by the history of the case, conjoined with the existence of those symptoms which palpably denote an inflammation of the iris and choroid membrane.

As iritis, whether symptomatic or idiopathic, is generally treated by mercurials, with or without antiphlogistic remedies and counter-irritants, a similar process of cure has been adopted in the iritis which succeeds fever. Such were also the remedies I employed in this disease, until I found their inefficiency on very many occasions; and, having been thus led to treat the affection upon other principles, I acquired the knowledge of the singular property of Peruvian Bark to arrest this inflammatory action. The discovery has been made known by me extensively in this city, partly among pupils during the course of clinical instruction, and partly in conversation to professional friends connected with hospitals; and it gives me great satisfaction to be able to state that it has been fully confirmed by others. From Dr. LENDRICK, physician to Mercer's Hospital, and from Mr. COLLES, surgeon to the Meath Hospital and County of Dublin Infirmary, I have received communications, which will be made known when I shall lay before the profession a full account of the disease. At present it is sufficient to allude to these communications, as fully confirming the efficacy of the remedy, even in those cases in which the mercurial treatment had failed.

For the same reasons that I refrain at present from any extended account of the symptoms of this disease, I shall not here enlarge either upon the causes which led me to employ bark for its cure, or upon the views which I entertain respecting the mode of action of this remedy. Discussions of this kind are not necessary for the immediate object of this communication. That bark should have the power of subduing a violent and disorganising inflammatory action, will appear incompatible with the existing views of the action of this remedy, and with the prevailing opinions of the nature of inflammation; and I know, from conversations with my professional brethren here, how difficultly this treatment will be reconciled to the prevailing routine practice. Here it may, however, be remarked, that it is not very long since the valuable discovery of the power of mercury to correct certain inflammatory actions of the eye has been generally admitted; nor was this discovery less in opposition to the then existing views of many practitioners, than that is which I now make known. I shall not disguise my confident hopes that this discovery of the power of bark will hold a very high rank in importance. Its value will not be confined to the disease in question. It is calculated to extend our views of the powers of this remedy, and to improve our treatment of many forms of inflammation. But, upon all these points, I shall enlarge on a future occasion.

Respecting the mode of exhibiting the bark, there is little to be said. If the inflammatory action be very violent, and the pain very distressing, I do not venture to employ the remedy without previous purging and bleeding, either topical or general. I am, however, by no means certain that this precaution is necessary; and I do not spend more than a day in this preliminary treatment. While the patient is taking the bark, his bowels must be regulated by any common gentle purgative. The bark in powder, and the sulphate of quinine, I have found equally effectual. It is the pale bark which is vended in general by druggists here. The dose of the powder which I employ is about half a drachm three times a-day: this I direct to be taken in milk. Whenever I use the Sulphate of Quinine, I prefer the form of solution, which should be taken in such a quantity that the dose of the quinine shall be about two grains three times a-day. Instances will occur in which larger doses must be given than those which I have mentioned.

It may be proper to observe, that I do not assert that the disease in question may not, on some occasions, be controlled by mercury, combined with evacuants and counter-irritants; for I have known patients recover under this treatment. But, in a very large proportion of these cases, such remedies will not avail; and in many in which they may ultimately prove successful, a prolonged treatment of some weeks may be required. Whereas, in a few hours, I may say, the morbid action is suspended by the bark; and the organ, which may have been for weeks in a state of disease, manifested by an almost complete suspension of its functions and great alteration of structure, shall be in a few days speedily and effectually restored to health. Whether this peculiar form of ophthalmic disease, which is now, and has been for a long period, so prevalent in Dublin, occurs in other countries; or whether it be even a frequent occurrence in Ireland, except in the metropolis, I have not as yet had any means of ascertaining. I therefore gladly take this opportunity of soliciting, with a view to a further publication, contributions from my professional brethren, not only in relation to the power of the remedy, but also regarding the history and symptoms of the disease.

Neuralgia.—Dr. Darwall and Mr. Wickenden, highly respectable and intelligent practitioners at Birmingham, have communicated to Mr. Hutchinson the following cases of Neuralgia:—

I. (By Mr. Wickenden.)—Mrs. Carless, ætatis sixty-four, Gough-street, Birmingham, during two years has been gradually affected with severe pain in her face. On the 16th of June, 1823, its severity suddenly increased, and, with a few minutes' intermission, continued four days. From her description of the affected parts, the disease appeared to be confined to the ophthalmic branch of the fifth pair of nerves. Calomel purges, with senna and salts, and leeches to the face, were prescribed; afterwards an emetic, succeeded by large doses of opium, two grains of which were given every hour for six or eight hours, without affording relief. She then took one drachm of the Subcarbonate of Iron every six hours, and felt perfectly relieved after the sixth dose, and has continued completely free from the disease up to this period,—the 4th of November, 1823.

In further illustration of this very satisfactory case, it may be permitted to remark that this lady suffered a pain of the most excruciating kind, concentrated in the suborbitar nerve of the right side of the face. This was aggravated upon the slightest movement, and so fearful was she of touching it that her face had remained unwashed for weeks together. Of course, eating at all times much increased it, and latterly she had eaten with a wooden spoon,—a metal one, if touching, causing such extreme aggravation of the pain."

Mr. Wickenden is a practitioner whose observation is too correct to render a remark of his of no value. He observes, that formerly he used to give doses of five grains of the iron, but that he never found any effect until he employed the larger quantities now generally adopted.

II.—In the second case drawn up by Mr. Wickenden, the pain was seated in the upper lip, accompanied with frequent convulsive twitches, and was completely cured by drachm doses of the Carbonate of Iron. The pain in this patient frequently returned, and was as frequently relieved by the Ferri Subcarbon.

III.—The third case was marked by most severe pain in one side of the head, particularly behind the ear, and recurring very frequently in the day. After correcting the digestive organs without affording any relief, the Subcarbonate of Iron, in drachm doses, perfectly removed the disease.

I. (By Dr. Darwall.)—"The first of these patients was Martha Foxley, a young woman twenty years of age. The pains, which she described as exceedingly severe, came on regularly at five o'clock A.M. and three o'clock P.M. They very much resembled those of neuralgia, having the same sudden accessions and abatements, but were not particularly severe in the distribution of the nerves, and were confined to the left half of the face and head, ceasing exactly in the mesial line. Her health in other respects was tolerably good, but the tongue was furred, and she occasionally had considerable indigestion. After evacuating her bowels very freely of much offensive matter, she took only one scruple of the Carbonate of Iron three times a-day for a week, when she reported that she had no pain for three days. She now omitted the medicine, but returned in a few days on account of a renewal of the attacks, when half a drachm of the same medicine was ordered her three times a-day. In another week the pain had again vanished; and, after continuing the medicine for nine or ten days longer, she was a second time dismissed as cured. I have not heard of her since, but I feel convinced that I should have seen her again had she suffered any relapse."

II.—"June 9th, 1823. Mr. —— was affected with syphilitic pains, coming on with extreme severity in the night, and particularly affecting the right knee, and accompanied with swelling both of the knees and ankles. On the 4th of June, he was ordered half a drachm of the Ferri Subcarbon. three times a-day. Since the 5th, he has had no pain of any consequence, and now only complains of weakness. He slept last night six hours together, which he had not done for several weeks before."

Southwell; April 4th.

Literary Notices.—Mr. **Shaw** has in the press an Essay an Aneurism of the large Vessels, with Remarks on the Proposal to revive the Operation of tying the Artery beyond the Tumor, illustrated by plates and diagrams.

Dr. **Harrison** has in the press, Pathological and Practical Observations on Spinal Complaints, illustrated with Cases and engravings. Also an Inquiry into the Origin and Cure of Distorted Limbs.

Mr. **Curtis**, the Surgeon to the Royal Dispensary for Diseases of the Ear, has just published a Clinical Report of the Institution, from its commencement to the present time; with a Table of the number of Patients admitted, cured, and relieved, showing the progressive increase and utility of the Charity.

A vacancy has occurred in the office of Physician to the Middlesex Hospital, by the resignation of Dr. **Southey**. The election is to take place on the 24th.

Sir E. **Home** has resigned the office of Surgeon to St. George's Hospital. The election of his successor is fixed for the 11th of this month.

Royal College of Physicians.—The Lectures of the present year will be delivered at the College, Pall Mall East, at four o'clock on each of the following Wednesdays and Fridays.

Gulstonian Lectures—Dr. **Watson**. May 2, 4, 9.

Croonian Lectures—Dr. **Yeats**, on the Structure, Functions, and some Diseases of the Colon. May 11, 16, 18.

Lumleian Lectures—Dr. P. M. **Latham**. May 23, 25, 30.

Lectures on Materia Medica—Dr. **Ager**. June 1, 6, 8, 13, 15, 20.

OBITUARY.

Recently deceased, Dr. **Freer**, Professor of Medicine in Glasgow.

Died, on the 20th March, at his father's house in Torrington-square, in the twenty-fourth year of his age, of a pulmonary consumption, **Ralph Henry Dunkin**, member of the Royal College of Surgeons, only son of James William Dunkin, Esq.

He had applied with much earnestness to the study of anatomy and surgery, during a long term of pupillage to Mr. Travers, at St. Thomas's Hospital. In the course of a residence of some months at Paris, in 1826, for the purpose of further professional accomplishment, he appears to have contracted a complicated dyspepsia, which gradually laid the foundation for the fatal affection of the chest.

He was a young man of good understanding and quick attainment, of a truly benevolent heart, and amiable manners; and his early removal (premature, who shall say?) is regarded by the small circle of his professional friends as one of those frequent but serious losses to society, which it is spared the pain of knowing only because time was wanting to reveal it.

MONTHLY LIST OF MEDICAL BOOKS.

[*No books can be entered on this List except those sent to us for the purpose; as, in the list hitherto transmitted, the names of works have frequently been given as published, which have not appeared for weeks, or even months, after.*]

An Apology for British Anatomy, as an Incitement to the Study of Morbid Anatomy; being an Abstract of a Lecture introductory to a Course of Illustrations of the Morbid Anatomy of the Heart and Aorta, delivered to the Profession in the Autumn of 1826. By **Richard Farre**, M.D.—London, 1827.

Elements of Physics; or, Natural Philosophy, General and Medical, explained, independently of Technical Mathematics. By **N. Arnott**, M.D. of the Royal College of Physicians.—Pp. 611. London, 1827.

An Essay on Morbid Sensibility of the Stomach and Bowels, as the Proximate Cause, or Characteristic Condition of Indigestion, Nervous Irritability, Mental Despondency, Hypochondriasis, &c. &c. To which are added, Observations on the Diseases and Regimen of Invalids, on their Return from hot and unhealthy Climates. Third Edition. By **James Johnson**, M.D. of the Royal College of Physicians, and Physician to his Royal Highness the Duke of Clarence; Author of the Influence of Tropical Climates on European Constitutions, and Editor of the Medico-Chirurgical Review, &c. &c.—Pp. 157.—London, 1827.

☞ This Essay has come to a third edition in six months. Highly as it has been spoken of by various reviewers, this speaks more highly still.

Observations on the Impropriety of Men being employed in the Business of Midwifery.—Pp. 56. London, 1827.

Laws of Physiology; translated from the Italian of Il Signor Dott. B. **Mojon**, Professor Emeritus in the Royal University of Genoa, and Member of many learned Bodies. With Additions, and a Physiological Table of Man. (Dedicated by permission to Sir **Astley Paston Cooper**, Bart. F.R.S. Surgeon to the King.) By **George R. Skene**, Member of the Royal College of Surgeons in London, and of the Medical and Chirurgical Society, &c. &c. —Pp. 126. London, 1827.

Some Observations on the Medicinal and Dietetic Properties of Green Tea, and particularly on the Controlling Influence it exerts over Irritation of the Brain. By **W. Newnham**, Esq. Author of an Essay on Inversio Uteri, &c. &c.—Pp. 32. London, 1827.

Cases illustrative of the Beneficial Effects of the Clorurets of Oxides of Sodium and Calcium, of the Chevalier **Labarraque**, of Paris; being the most powerful and effectual General and Local Antiseptics in the Practice of Physic and Surgery. By **J. G. F. Hassell**, M.D. Resident Physician at Bologne-sur-Mer, late of the British Army.—Pp. 31. London, 1827.

METEOROLOGICAL JOURNAL,

From March 20th, to April 20th, 1827.

By Messrs. Harris and Co. Mathematical Instrument Makers, 50, High Holborn.

February	Rain gauge.	Moon.	Thermom.			Barometer.		De Luc's Hygrom.		Winds.		Atmospheric Variations.		
			9 A.M.	MAX.	MIN.	9 A.M.	10 P.M.	9 A.M.	10 P.M.	9 A.M.	10 P.M.	9 *a.m.*	2 *p.m.*	10 *p.m.*
20		☾	50	54	48	30.11	30.08	96	95	SW	W var.	Cloudy	Fair	Cloudy
21			51	54	47	29.95	29.96	97	88	W	W	—	—	—
22			57	58	46	29.95	29.97	86	87	W	W	Fair	Fine	Fine
23			53	58	45	29.97	29.96	84	85	WNW	WNW	—	—	Cloudy
24			56	58	45	29.94	29.90	78	83	W	W	—	—	Fine
25			51	52	35	29.85	30.03	83	75	W	WNW	—	—	—
26			40	47	37	30.15	30.04	75	74	N	SW	—	—	—
27		●	43	51	47	29.85	29.66	81	90	SSW	WSW	—	—	Cloudy
28			47	52	39	29.55	29.07	89	90	W	SW	—	—	Rain
29			44	51	36	29.11	29.24	83	81	WSW	SW	Cloudy	—	Fine
30			42	49	39	29.30	29.61	83	92	WNW	NW	Fair	—	—
31			45	50	41	29.98	30.04	78	78	N	NW	—	—	—
Mar.														
1			44	46	45	30.04	30.01	85	97	WSW	SW	Cloudy	Cloudy	Misty
2			48	48	48	29.99	29.99	98	89	WSW	WSW	—	—	Cloudy
3			52	58	46	29 96	29.94	98	87	W	WSW	—	—	—
4		☽	53	49	49	29.98	29.97	87	77	SW	SSW	—	Fair	—
5			58	64	51	29.97	29.92	77	78	S	ESE	Fine	Fine	Moonli.
6			63	67	50	29.81	29.92	75	82	SW	W	—	—	Rain
7			58	62	48	30.00	30.12	78	85	WNW	W	—	—	Cloudy
8			53	60	47	30.21	30.12	79	83	NE	E	—	—	—
9			52	57	47	29.97	29.81	83	88	SSE	SW	—	—	Moonli.
10			53	57	43	29.74	29.77	78	78	WSW	ESE	Cloudy	Cloudy	Rain
11		○	51	57	46	29.76	29.76	92	85	ESE	SSW	—	—	Cloudy
12			52	55	42	29.67	29.74	87	90	SW	SSW	—	—	—
13			45	58	42	29.97	30.04	88	70	W	NNW	—	Fine	Fine
14			52	58	47	30.07	30.01	72	77	N	NNW	Fine	—	—
15			54	56	41	29.92	29.93	79	81	N	NNW	Fair	Rain	Cloudy
16			50	54	42	29.93	29.93	79	82	NNE	N	—	Fair	—
17			47	54	41	29.91	29.88	86	87	N	SE	Cloudy	—	Rain
18		☾	43	47	44	29.79	29.64	92	93	WNW	WNW	Rain	—	—
19			47	52	39	29.63	29.56	85	88	NE	SE	Cloudy	—	Fair

NOTICES.

It is intended, in some of the following Numbers, to treat of the subjects of which we subjoin a list. We shall feel particularly obliged by the communication of any Cases or Observations connected with these topics.

Injuries of the Spine.
Diseases of the Heart and Great Vessels.
Wounds, &c. of Arteries.
Removal of Calculi from the Female Bladder.
Hemorrhage from the Urethra.
The application of Moxa to the Treatment of various Chronic Diseases.
Hydrophobia.

Communications have been received from Dr. Lee, Mr. Rose, Dr. Gregory, Mr. Wickham, Mr. Dickinson (through Mr. Brodie), and Dr. Milligan.

THE LONDON
Medical and Physical Journal.

No. 340, VOL. LVII.] JUNE, 1827. [No. 12, *New Series*.

For many fortunate discoveries in medicine, and for the detection of numerous errors, the world is indebted to the rapid circulation of Monthly Journals; and there never existed any work, to which the Faculty, in Europe and America, were under deeper obligations, than to the Medical and Physical Journal of London, now forming a long, but an invaluable, series.—RUSH.

ORIGINAL PAPERS,
AND
CASES OBTAINED FROM PUBLIC INSTITUTIONS AND OTHER AUTHENTIC SOURCES.

DISEASES OF THE CHEST.

Cases intended to illustrate the Use of the Stethoscope and Percussion in Diagnosis. By ÆNEAS MAC ANDREW, M.D. Physician to the SOUTH LONDON DISPENSARY.

CASE I. — Redman, a stout married woman, twenty-six years of age, mother of a large family, admitted December 19th, 1826. She has occasionally been liable to fits of taciturnity, lasting for some days, and attended with want of sleep, and the refusal of nourishment. About three weeks ago, she received the intelligence of her father's death; an event that had been concealed from her for some months. She then became silent, refused food, and did not sleep in the night. Five or six days ago, she had cold shivering, followed by heat of skin, pain of head, dyspnœa, cough, and pain of the chest; since which time she has taken some medicines, the nature of which was not ascertained. When visited to-day, she appeared to suffer a great deal; her face was livid; she understood what was said to her, and, without speaking, referred her uneasy sensations to the chest. There was very great dyspnœa, and the respiration was attended with a mucous wheeze, audible to the unassisted ear. On applying the stethoscope, the same wheeze was heard over the whole of the right side of the thorax. Neither the wheeze nor the respiratory murmur could be heard on the left side. Percussion was scarcely employed. She was said to have expectorated some blood in the course of her illness, and two viscid brown coloured sputa were shown. Her pulse was quick, feeble, and very easily compressed; tongue clean; bowels confined for three days; involuntary discharge of urine. She died in six hours.

The body was examined thirty hours after death. Great embonpoint. Percussion of the chest afforded no symptom whatever: the sound was equally dull on both sides. There were two inches of fat under the integuments of the abdomen, and somewhat less on the thorax. The left side of the thorax contained about two pints of a dirty brown-coloured fluid, having whitish flocculi suspended in it, and being perfectly inodorous. The lung on the same side was much diminished in size, and pressed towards the spine. It adhered to the diaphragm by means of coagulable lymph, which was very easily torn through. The pleura was much more vascular than natural, and in many places was covered with lymph. The lung was thin and flaccid, and of a livid colour: it did not crepitate; it sunk in water. When cut into, it had a dark red colour, interspersed with greyish-coloured streaks. One portion of it was softer than the rest. It was not attempted to inflate it, no blowpipe being at hand. The right lung was perfectly healthy. The bronchi contained a reddish-coloured mucus, but their inner membrane was not preternaturally red. Heart without disease. The abdominal viscera appeared healthy on a superficial examination. Head not examined.

This patient appears to have been affected, in the first instance, with melancholia; on which supervened an attack of pleuritis, that proved fatal. When first visited, she was evidently in the agony, which circumstance prevented a very minute examination. The history obtained from her friends was enough to render an acute inflammation of the respiratory organs extremely probable; and the additional information afforded by the stethoscope, was, that the respiration was carried on in the right lung alone, and consequently that the disease was situated on the left side. It also showed that the right lung was so gorged with mucous fluid, as to render an early death inevitable. It was scarcely possible to determine whether the lung or the pleura was most affected: the severe pain of the side indicated the former, and the appearance of the sputa the latter. Percussion was of no use in this patient, for the accumulation of fat was so great as to prevent any hollow sound being heard. This general want of sonorosity, however, only deprives us of a symptom, but does not lead to any erroneous conclusion. The condition of the left lung is a good example of the manner in which the appearance of the pulmonic tissue may be altered by mere pressure, without any change in its structure.

Case II.—William Coldford, a sailor, of muscular habit and short stature, supposed to be about thirty years of age; admitted March 25th, 1826. He states that, about fifteen months ago, whilst using strong exertion in pulling a rope, he was attacked with pain of chest and difficulty of breathing, for which a blister was applied. These complaints have never entirely left him since that time, and have been accompanied with palpitations, bloody expectoration, and occasional œdema; symptoms that have always been aggravated by exposure to cold.

He complains to-day of great dyspnœa, so as to be unable to lie down in bed. There is pain under the sternum, coming on occasionally, and augmented by coughing. He expectorates a frothy viscid mucus, slightly tinged with blood. The chest, throughout the whole of its extent, yields a dull sound on percussion. On applying the stethoscope, the respiratory murmur may be heard in almost every point of the chest; it appears to be somewhat weaker on the left side posteriorly. The impulse communicated by the pulsations of the heart is strong, particularly towards the sternum, and each contraction of the ventricles is attended with a loud "*bruit soufflet.*" The pulse in the left arm is strong and hard; in the right arm it is less hard, and more easily compressible. Tongue whitish; appetite tolerably good; bowels open; urine high coloured; slight œdema of the feet; the face is pale and swollen, and the conjunctiva has a yellow tinge, but his friends assert that this is his natural appearance. For seven days he has been taking a mixture containing Digitalis and Conium.

V.S. ad ℥ xij.—Hydrarg. Submur. gr. v.; Pulv. Jalapæ gr. xxx. M. fiat pulvis statim sumendus.—Very spare diet.

26th.—Dyspnœa somewhat relieved; pain less severe; cough less frequent. The bowels have been freely opened. The blood drawn is firmly coagulated, but without any buffy coat.

27th.—No change.

Sumat Tinct. Digitalis m. x. bis die.—An oily emulsion for his cough.

28th.—Complains much of pain under the sternum, which however is not constant. The pulse is less strong; some degree of nausea. Œdema of the feet increased.

Admoveantur sterno Hirudines x.—Intermittantur Tinct. Digitalis et Mist. Oleosa.

29th.—Leeches bled well; pain of chest relieved. He passed a very restless night. Skin and eyes are still of a yellow tinge; and he complains of pain on pressure in the hepatic region. Œdema diminished.

Rep^{r} Tinct. Digitalis.

30th.—Pain of chest has returned; œdema is increased. *Bruit soufflet* may be heard in the chest as formerly, and also for some inches below the pit of the stomach, along the course of the abdominal aorta. Abdomen painful on pressure.

V.S. ad ℥ x.—Mistura Mucilaginosa pro tussi.

31st.—Pain of chest relieved. Blood not buffy. Œdema as before.

℞. Acet. Potassæ ʒ iv.; Aquæ Menth. Pip. f. ℥ x. fiat mistura cujus capiat cochlear. ij. magna ter die.—Misceatur Supertart. Potassæ cum potu communi ad gratum acorem efficiendum.

April 1st.—Pain of chest and dyspnœa are severe.
Hirudines xx. sterno.

2d.—Pain gone. Dyspnœa extreme. Pulse tolerably strong. He died in the evening, when standing with his breast leaning on a chair, the posture that always gave him most relief.

On examining the body, there was found to be great œdema of the lower extremities, and much adipose substance under the integuments of the thorax and abdomen.

Chest: Pericardium contains about five ounces of fluid. Heart so much enlarged as to be nearly twice the size of the subject's fist. Parietes of left ventricle considerably thickened; but of the right, scarcely at all. Semilunar valves of the aorta considerably thickened at their central margin, by a deposition of cartilaginous matter. Coagula of blood in both ventricles. Pulmonary artery sound. Right lung, throughout its whole extent, adhering to the pleura, from which it cannot be separated without using force, particularly towards the diaphragm. Left lung also adhering to the pleura, but less extensively, and more easily separated. The lungs crepitate on pressure in every direction; lower lobe of right lung partially changed, so as to have a yellow colour. The trachea and larger bronchial tubes contain much frothy mucus, and their lining membrane is of a vivid red colour. Frothy mucus issues abundantly from incisions made into the lungs.

Abdomen: Smaller intestines distended with air. Inner coat of the stomach somewhat reddened. Portions of the mucous membrane of the jejunum are elevated from the effusion of air, and the same emphysematous swelling extends into the adjacent mesentery. Liver somewhat enlarged and hardened.

Head not examined.

The age, constitution, and habits of this patient rendered him particularly obnoxious to those affections of the heart that depend upon a morbid increase of strength. The attack of pleurisy, from which he dated his complaints, appears to have been severe, and inadequately treated. This disease gave rise to the firm adhesions by which the right lung was fixed to the side of the chest in its whole extent, and, by preventing the natural sliding of the lung on the parietes of the chest during inspiration, it gave rise to a certain degree of dyspnœa. This alone might cause enlargement of the heart in a person predisposed to it; but in this patient there existed at the same time a change in the structure of the aortic valves, which is a more common and less equivocal cause of cardiac enlargement. This enlargement was marked by symptoms perhaps sufficiently characteristic, without having recourse to the stethoscope; which, however, besides rendering more evident the great increase in the force of the ventricular contractions, allowed us to advance a link in the chain of morbid actions, and nearly proved the existence of an obstruction at the root of the aorta. It is true that the *bruit soufflet* may often be heard, without being caused by any change of structure, and, when taken alone, it is a very equivocal symptom; yet when, as in the present case, it is never absent, is very distinct, and attended with other marks of diseased heart, the existence of some obstruction to the circulation at the part where it is loudest can scarcely be doubted.

The difference of the pulse in the two arms does not appear to have been at all connected with the disease of the heart. It most probably arose from a congenital variation of size in the radial arteries, which perhaps would be found to exist more frequently, if oftener sought after. Most authors recommend the pulse being felt in both arms, but the rule is generally neglected, and it is manifest that this may lead to errors in practice.

The bleeding, purging, and digitalis, were prescribed with the view of diminishing the quantity of circulating fluid, of lessening the excess of strength in the action of the heart, and of cutting short the bronchial inflammation. The diuretics were afterwards employed to carry off the anasarcous swelling; but the patient died suddenly, as frequently happens in disease of the heart.

The effusion of air under the mucous tissue of the jejunum, and between the laminæ of the mesentery, was an appearance new to me; nor have I been able to meet with any account of it amongst authors.

Case III.—James Nowlans, aged forty-five, a horner, admitted 29th January, 1827. On February 1st, the following history of his complaints was obtained: About seven months ago, he was attacked with pain of the right side of the thorax, cough, and dyspnœa. The cough has never entirely left him since that time; he has expectorated much, and become very thin and weak. He has been confined to his bed for a month.

When examined to-day, he was found to be extremely emaciated. He complains much of dyspnœa, and coughs almost incessantly. The inspirations are twenty-eight in a minute. The expectorated matter is not very abundant: it consists of mucus, tinged with blood; is of a uniform red colour; and adheres to the vessel, hanging from it when inverted, in one continuous mass. He has little pain of chest. On employing percussion at the superior and anterior parts of the chest, the sound on the right side is found to be hollow. On the left side, the sound is distinctly stronger. Little difference is perceptible on other parts of the chest. On applying the stethoscope, the respiratory murmur may be heard over the whole of the right side, mixed with wheezes, and partially obscured by them: on the superior parts, the wheeze is mucous; on the inferior, sonorous. No respiratory murmur can be heard on the left side of the thorax, where the sound is so strong on percussion; on other parts of the left side it is weak, and occasionally mixed with a sonorous wheeze. Although he breathes more easily when sitting up, he lies on his back from debility; if on either side, the dyspnœa is augmented. Pulse 100, easily compressed; tongue whitish; appetite gone, he can take nothing but milk and water; bowels open once a-day. Two days ago, a blister was applied to his chest, but did not rise well. He has taken for two nights a pill composed of Conium and Ipecacuan.

Emplast. Lyttæ amplum dexteriori lateri thoracis. Capiat Tinct. Digitalis m. v. quater indies.—℞. Extract. Conii ʒj.; Extract. Hyoscyam. ʒss.; Mucilag. Acac. f. ℥ iv. M. sumat f. ℥ ss. ter die.

Feb. 2d.—He has scarcely slept at all, on account of pain from the blister, which has risen very well, but been applied to the left side. The dyspnœa is not so urgent; the cough is less troublesome; the sputa are diminished in quantity, but have the same character as yesterday. The stethoscope, as far as it can be applied, gives the same results, only that, on the superior and anterior part of the left side, a sonorous wheeze is heard. It is evident, however, that the wheeze is not produced on the left side, but on the right, where it is very strong. Pulse 102; tongue dry. Three stools.

Cont^{r} omnia.

3d.—He has taken, contrary to orders, some decoction of Sassafras, and a glass of port-wine. He slept better. Inspirations are twenty-six in a minute. The sputa are more deeply tinged with red. Percussion and mediate auscultation afford the same results as on the first. Three very scanty stools.

Continue.

4th.—He passed the night tolerably well, not appearing worse than yesterday. At seven this morning, the dyspnœa becoming urgent, he was much agitated, declared that he had burst a blood-vessel; and, having coughed up some scarlet-coloured frothy blood, he expired.

Permission to examine the body was not granted till the end of three days, when putrefaction had made considerable progress; the colour of the integuments being greenish, the cuticle easily detached, and the odour strong. The body was much emaciated. There was no difference of size in the two sides of the thorax, nor did they yield a different sound on percussion. A puncture made on the superior and anterior part of the left side allowed no air nor fluid to escape; but, on dividing the cartilages of the sixth and seventh ribs on the same side, a quantity of air rushed out with some force, so as to be distinctly audible. On both sides the lungs adhered to the pleura for a small extent, and were easily detached; each side contained about half a pint of bloody serum.

On the superior lobe of the lung were observed two foramina, at the distance of an inch and a half from each other, and large enough to admit a goosequill: they were apparently lined with pleura, and terminated in a cul-de-sac, so as to be probably an original variation in structure. The trachea, the large blood-vessels below the atlantal margin of the sternum, and the œsophagus, were now cut through, in order that the lungs might be removed from the thorax, and examined with greater ease. This being done incautiously, an aneurismal sac was cut into, and part of it detached with the lungs.

The bodies of the third, fourth, and fifth vertebræ were completely denuded, and partially absorbed. They all felt rough to the touch, but more particularly the fourth. The intervertebral substances projected considerably beyond the vertebræ.

On slitting up the aorta, the inner membrane was found much reddened; and, about half an inch below the origin of the left subclavian artery, there was observed a circular opening, with a well-defined smooth margin, and nearly an inch in diameter. This led into the aneurismal sac, which was about the size of a hen's egg, and contained coagula of a fibrinous nature, and easily separable into layers. On their removal, a communication was found to exist between the sac and the left bronchial tube, immediately below the bifurcation of the trachea. The lining membrane of the trachea was of a dark red colour, and the left bronchial contained portions of dark coagulated blood. The left lung was of a dark colour throughout; it crepitated, and swam in water. On pressing it firmly, a thin bloody fluid exuded abundantly, together with portions of coagulated blood. The right lung was not so dark coloured, but also yielded a bloody fluid on pressure. The pericardium contained about two ounces of bloody fluid. The heart was pale, flaccid, and nearly empty of blood.

In the abdomen, the intestines were distended with flatus. The mucous coat of the stomach of a bright red colour towards its cardiac orifice. The smaller and larger intestines healthy. The renal veins and vena cava contained no blood, but were distended with air, which escaped on a puncture being made. The liver adhering to the diaphragm in the whole of its convex surface: it was easily torn, and had a dirty dark green colour. The spleen was still farther advanced in putrefactive dissolution.

The head was not examined.

This patient laboured under three diseases of the chest, which had no necessary connexion with each other. The aneurism, which was the most serious affection, and the immediate cause of his death, afforded no symptom by which it could have been detected during life, and scarcely any that could have led to a suspicion of its existence. Neither in the history of the disease nor in the examination of the patient, did any circumstance occur which could not be accounted for by the presence of long-continued inflammation of the bronchial membrane, and by the pneumo-thorax. The sac had attained a considerable size, without any remarkable derangement of the circulation; the osseous bodies of the vertebræ had been partially absorbed, without any local pain or external tumor; and the bronchial tube had yielded to the same process, without a dyspnœa greater than what accompanies many other diseases of the chest.

Aneurism of the aorta, in its early stages, affords us no characteristic symptom; and, in the majority of cases, it is as much concealed from the explorator by the stethoscope as from any other diligent observer. Pneumothorax is an affection that can scarcely be discovered without the assistance of percussion and mediate auscultation, and these methods alone suffice to demonstrate its presence. They must, however, be taken in conjunction, so as to correct each other. In this patient, the tympanitic sound in the part where the air was effused was very remarkable; and the total want of respiration here contrasted strongly with the noisy breathing on the other side of the chest. On one occasion, the wheeze was distinctly heard on the left side; but a little attention showed that this was merely the extension of the wheeze which was very loud on the right side. On opening the body, the air was found to have changed its situation; but this might easily have happened, either during the struggles of the agony, or by moving the body after death.

The cause of the air being formed in the pleural cavity in this patient, is not very evident. There was no communication between the bronchi and the pleura; neither can we suppose that gas had been evolved from the decomposition of the pleuritic effusion; for the quantity of fluid was but small, it was not evidently changed by putrefaction, and it was precisely the same in both sides of the chest, although the air had only been formed in one. Succussion, too, had been tried during life, but afforded no result. However this may be, its existence was evident, and it rendered the prognosis more unfavourable, without leading to any change of treatment.

The inflammation of the bronchial membrane was, perhaps, sufficiently marked by the constant cough,—the great dyspnœa without much pain,—the appearance of the sputa,—and the frequency of the pulse; but the mucous and sonorous wheezes were more certain indications of its presence. It may be questioned whether the sanguineous appearance of the sputa depended upon the increased action of the vessels of the mucous membrane, or if it were caused by the escape of a minute portion of blood from the aneurismal sac. The former opinion is by far the more probable. We can scarcely doubt that, whenever the communication between the sac and the bronchial tube was effected, the blood was poured out in such quantity as to prove quickly fatal, by producing either suffocation or syncope.

161, *Great Surrey-street;*
March 20, 1827.

Case of Hypertrophia Cordis; with Remarks. By WILLIAM MILLIGAN, M.D. Physician to the MIDDLESEX INFIRMARY, and to the ROYAL INFIRMARY FOR CHILDREN.

SARAH FARRINGTON, ætatis forty-four, a washer-woman, of a slight figure and delicate constitution; is married, and has had eleven children; was admitted under my care at the Middlesex Infirmary, on the 9th of March. She complained of palpitation of the heart, dyspnœa, slight cough, general debility, and constipated bowels. Countenance sallow; tongue white and moist; appetite bad; pulse eighty-two, full, strong, and regular; pulsation very visible in the neck, more particularly on the right side, having on a superficial view the appearance of aneurism of the right carotid, but, on more careful examination, the calibre of the artery does not appear at all enlarged. On placing the hand over the heart, a strong "continuous" pulsation may be felt; and, on application of the stethoscope between the cartilages of the fifth and seventh ribs on the left side, the contraction of the ventricles appears prolonged, or as it were doubled; the sound tumultuous, with a strong impulse. The contraction of the auricles very short, and little sonorous. Catamenia had ceased twelve months since, but now appear about once in three months, scanty, and attended with pain in the lumbar region.

She was attacked last October with an acute pain in the region of the heart, attended with dyspnœa and cough, for which she was bled by a medical gentleman, and took some medicines, which relieved her for a time. For the last three months she has observed a palpitation in her left side, increased by severe exercise, going up stairs, or any agitation of mind. Attributes her disease to great care and anxiety, brought on by the misconduct and ill-treatment of her husband.

> Aperiatur vena brachialis, et mittantur sanguinis unciæ octo.—℞. Pil. Rhæi compos. semidrachmam, divide in pilulas sex æq. capiat duas horâ somni, pro re nata, ad alvi solutionem.—℞. Infusi Quassiæ ℥ j.; Tincturæ Digitalis m. xv. M. fiat haustus, ter die sumendus.—Ordered a spare vegetable diet, and to avoid exercise.

The medicines were continued until the 9th of April, with little relief to the symptoms, except the bowels being kept open. I now requested Dr. JAMES JOHNSON, the consulting physician to the Middlesex Infirmary, to meet me on that day. After a careful examination with the stethoscope, he was decidedly of opinion with myself that it was a case of hypertrophy of both ventricles of the heart. The following sedatives were then added to the other remedies:—

> ℞. Camphoræ (Sp. Vin. sol.) gr. tria; Extracti Hyoscyami gr. duo; Mucil. Acaciæ q. s. ut fiant pilulæ duæ æquales, habeat xij. tales. Capiat duas omni nocte.—App' Emplast. Antim. Tartar. lateri dextro.

Hypertrophia Cordis consists of an increased thickness of the walls of the ventricles, of the septa and columnæ carneæ. The cavity of the heart is rather diminished; the blood is consequently sent into the arteries with greater force, which will account for the pulsations in the neck, as well as for the pulse at the wrist being full and strong. The dyspnœa and cough may be explained from the perpetual irritation the lungs suffer from the increased size of the heart, as well as the difficulty with which the blood is transmitted through its cavities. The palpitations may be referred to that law by which every irregular action of a muscular part, from whatever cause it arises, puts on the form of spasm or convulsion. The absence of the livid countenance and œdema of the extremities, point out the disease to be of short standing.

The only disease likely to be confounded with hypertrophy is "simple aneurism," or the "passive aneurism" of CORVISART. In the latter, the power by which the blood is propelled is rather diminished than increased; the cavity of the heart becomes more or less dilated, and the pulse at the wrists is much smaller, softer, and weaker, than usual. However, the pulse is "not always" soft and weak. PORTAL mentions one case in which the pulse was strong and hard until death. On examination with the stethoscope, the pulsations are clearer than natural, the ventricular contraction is distinct and sonorous; the extent in which we can hear the pulsation is increased, whilst the impulse is trifling. The more clear and louder the sound is, the greater the dilatation may be considered to be.

Angina Pectoris is known by the anxiety, difficulty of breathing, and pain of the arms, coming on by accessions, and much increased by severe exercise.

Aneurism of the aorta, or of the carotid arteries, can scarcely be mistaken for hypertrophia cordis: the former, however, may be a consequence of, and dependent upon, the latter.

The principal object kept in view in the treatment of this case, has been to render the circulation of the blood slower and weaker, by which means we certainly prevent a rapid increase of the disease, if we cannot cure it.

This case is related with the view of pointing out the symptoms by which the disease may be known to the junior members of the profession, and not of suggesting a remedy; which, I fear, would be no easy task. The recital, however, may serve to prevent fruitless attempts, and perhaps the aggravation of the symptoms, and consequent distress of the patient, where, upon due knowledge of the disease, art has evidently little to offer.

Should any further opportunity of illustrating this case be afforded me, I shall have much pleasure in stating it to the profession.

Portman-street; April, 1827.

Cases illustrating the Use of the Balsam of Copaiba in Chronic Inflammation of the Mucous Membrane of the Lungs; with Remarks. By R. La Roche, M.D.

Case I.—Christina P., aged about eighteen years, was attacked, towards the end of September, 1821, whilst in the country, with the characteristic symptoms of inflammation of the lining membrane of the lungs. She was bled, vomited, and purged, by the physician of the place, and kept on a strict antiphlogistic regimen. About two weeks after her first attach, she was removed to the city, and placed under my direction. At the first visit, she presented the following discouraging symptoms: violent cough, which was particularly troublesome during the night, and accompanied with a copious expectoration of matter of a dark yellowish-green colour and unpleasant smell, and sinking in water. She was moreover labouring under fever, characterised by a pulse beating 120 strokes in the minute; hot skin, especially of the palms of the hands; hectic flushes, night sweats, &c. &c. She was ordered the usual remedies, with demulcent drinks, mild anodynes at night, and a blister to the chest.

After continuing a few days under this treatment, she was suddenly attacked with hemoptysis, and her fever acquired intensity. For these symptoms she was bled to the amount of ten ounces; ordered fifteen drops of Tincture of Digitalis three times a-day; and the blister was kept in a state of suppuration.

From these means she experienced some relief; the spitting of blood was arrested, and the condition of her pulse and skin improved. Finding, however, that her cough and expectoration continued as before, together with her nocturnal febrile excitement, and observing, moreover, that there existed no sign of irritation of the stomach, she was ordered to take a table-spoonful of Balsam Copaiba mixture three times a-day. Under the use of this medicine and of the Digitalis, the nocturnal febrile symptoms amended, the expectoration improved, and the appetite gradually returned. She was then put under the use of a small quantity of milk for diet, and the mixture was continued.

By persevering in the use of these means, she derived such manifest benefit, that, after a few weeks, she was in a fit condition to be allowed a more substantial diet, and to be permitted to visit her parents in the country; whence, after a few months, she returned in apparent good health, and free from cough, expectoration, or fever. She now enjoys good health, is married, and has borne children.

Remarks.—This case, the first of this disease in which I had employed the copaiba, was well calculated to make a strong impression on my mind, and to induce me to have recourse to it on the first favourable occasion that should present itself to my observation. I accordingly soon did so in a case of confirmed phthisis, for which I was consulted, not with a view of curing the patient, (for the disease had already progressed too far to allow me to anticipate a recovery,) but of relieving her troublesome cough and copious expectoration. Nor was I disappointed in my expectation: the cough was in some measure relieved, but in the course of a few months the patient sunk to the grave. The same effects have subsequently been derived in many similar cases, from the same remedy; but yet I am far from wishing to inculcate the idea that, in most cases of confirmed phthisis of either kind admitted by nosologists, the copaiba will be found an effectual and useful remedy, or even a palliative; for I am too well aware that this disease is, in very many cases, accompanied with symptoms indicating irritation, and even inflammation, of the stomach and bowels, and with general fever, which, as we have seen, contra-indicate the use of the remedy.

Case II.—Mrs. P., an old lady, about sixty-five years of age, and who has been subject for many years to frequent attacks of bronchitis, supervening on a chronic state of the same disease, was taken, in November 1823, with high febrile excitement, violent cough, dull pain about the chest, a little oppression, headache, thirst, foul tongue, nausea, &c. The state of her pulse seeming to forbid the use of the lancet, she was puked with Ipecacuanha, her bowels were opened with Senna and Manna; she was kept on low diet, and under the influence of small and repeated doses of Antimony. After a few days her fever abated, but the cough continued very troublesome, and expectoration very copious, yellow, thick, and opaque.

Small nauseating doses of Ipecacuanha, opiates at night, and Tartar-emetic Ointment to the chest, which were now resorted to, seemed to produce a beneficial effect, and were persevered in for some time. Finding, however, that her cough and expectoration were still troublesome, and as her tongue was now perfectly clean, moist, and rather pale, and her digestive organs in a natural condition, she was ordered twenty-five drops of Balsam Copaiba, in a wine-glassful of cold chamomile tea, three times a-day. She continued under the use of this remedy during four weeks, increasing the dose gradually to forty drops, and adding occasionally a few drops of laudanum, to prevent catharsis. She was at the same time recommended a strict milk diet, and, at the end of the period before mentioned, I had the satisfaction of finding that all her unpleasant symptoms had disappeared.

She continued to enjoy perfect health for several months after, since which time I have lost sight of her. When I last saw her, she unhesitatingly informed me that she was better than she had been for a long time before, and attributed her cure to the balsam.

Remarks.—I am perfectly aware that by many I shall be accused of attributing, perhaps, too great an agency, in the happy termination of this case, to the copaiba; and that the external revulsive application, together with the other remedies and the abstinence, might have been sufficient to effect the cure, without the aid of this medicine. Admitting, however, that this might have occurred, would we not be warranted, by a parity of reasoning, in calling in question the real efficacy of every article of the materia medica; since few are used alone, and without the assistance of others. But it may be remarked, that the subject of the present observation had been affected before with similar symptoms, and that, although treated by means of the same remedies to which I had recourse, (the copaiba excepted,) she had retained her cough for a number of months, or even years. When this remedy was commenced, the cough was very troublesome, and expectoration very copious; and in a very few days a change for the better was noticed. From which I must be allowed to believe that we may, without impropriety, attribute to the copaiba some agency in the cure.

In this case the urinary secretion was not much affected in respect to quantity, but a good deal so in smell and appearance.

Case III.—Mrs. Lay, aged seventy-three years, was attacked, a few weeks after the recovery of the preceding patient, with all the characteristic symptoms of inflammation of the mucous tissue of the lungs,—violent cough, sense of oppression, dull pain in the chest, hot skin, &c. The pulse being tense, venesection was had recourse to twice in the first twenty-four hours; after which a blister was applied over the chest.

In the course of the treatment, she was ordered small doses of antimonial preparations, and occasionally purged with Castor-oil. By means of these remedies, much benefit was obtained: her oppression and pain gradually disappeared, and her pulse, skin, and digestive organs, returned to their natural state. The cough continuing, however, and the expectoration being very copious, thick, opaque, and yellow, the remedies usually employed on such occasions were used several weeks, without effect: Balsam

Copaiba was therefore substituted, and administered in an emulsion, in doses of twenty-five drops three times a-day. Under the use of this medicine, the unpleasant symptoms gradually diminished, and at the end of less than a month had totally disappeared. Shortly after, however, Mrs. L. was attacked with all the symptoms of softening of the brain, which in a few days terminated fatally.

Remarks.—It is evident that in this case, notwithstanding its termination, the balsam copaiba was beneficial; since, under its use, the symptoms for which it was prescribed were entirely removed. The cephalic attack, from all appearances, was unconnected with the primary disease, and could not arise from the action of the copaiba.

Case IV.—Isabella S., about twenty-five years of age, of a lymphatic and bilious temperament, and subject for some time to frequent colds, was attacked, in December 1823, with the usual symptoms of catarrhal fever,—hot skin, frequent pulse, headache, attended with fullness and pain in the chest, and harassing cough. She was bled, puked with Ipecacuanha, ordered Antimonials in small and repeated doses, and demulcent drinks, and placed on a strict antiphlogistic diet. In a few days, the most urgent symptoms had in great measure subsided; but, the pain and cough continuing troublesome, a blister was ordered to the chest, Antimonials continued, and occasional doses of Castor-oil administered. This plan of treatment was persevered in for some time, when the fever diminished through the day, and only appeared towards night, attended with hot skin, quick pulse, and perspiration towards morning. The cough, however, still continued, was especially violent towards morning; and the expectoration was copious, thick, yellow, opaque, and at times of a greenish tinge.

Thinking that this opportunity was favourable for the administration of the Copaiba, it was prescribed in doses of twenty-five drops three times a-day, in a wine-glassful of milk, to be increased five drops each dose every third day, unless it produced irritation of the stomach, as indicated by nausea, pain, thirst, &c. Under the use of this remedy, occasional anodynes, and a milk diet, the cough and expectoration gradually disappeared, and in the course of a few months the girl recovered. She now enjoys good health.

Case V.—Sarah Morgan, aged nine years, of a lymphatic temperament, narrow chest, and who had laboured a few months before under an attack of bronchitis, was taken, in November 1824, with fever, loss of appetite, cough, very copious expectoration of white thick matter; not attended, however, with pain in the chest. She emaciated very rapidly; her skin became hot, her cheeks were flushed, especially at night; pulse much accelerated. In the course of ten or twelve days, she was puked several times with Ipecacuanha, purged with Castor-oil, ordered small doses of Antimonial Wine, and kept on low diet. Under this plan of treatment, she seemed to improve; the fever subsided, and no other symptoms appeared to remain, with the exception of her cough and copious expectoration. Mild tonics were now administered, and anodynes given every night to allay irritation; but under the use of these remedies the symptoms were aggravated: her pulse once more became accelerated, her skin hot, and the expectoration insensibly acquired a fetid smell and greenish tinge. It was now evident that the tonic plan, so far from being beneficial, had aggravated the irritation of the lungs. It was in consequence laid aside. Antimonial Wine was once more resorted to, and a blister applied to her chest. After a few days, the irritation of the system was calmed, but the cough and expectoration remained unabated.

Under these circumstances she was put under the use of Balsam Copaiba, in doses of six drops three times a-day; and anodynes were given at night to procure sleep. By persevering in the use of this remedy, and of a diet consisting of milk diluted with barley water, and a small portion of stale bread, Miss Morgan recovered perfectly in the course of six weeks. She had the benefit of the advice of Dr. PHYSICK, who, at my suggestion, was requested to attend in consultation.

The following case I owe to the politeness of my friend Dr. MONGES, of this city, a physician distinguished for his extensive experience and practical accuracy.

CASE VI.—Mr. Roberts, aged twenty-two years, of a lymphatic temperament, and who had lost two brothers with phthisis pulmonalis, was attacked a few years ago with the usual symptoms of catarrh, which were soon so aggravated as to threaten him with consumption; the cough having become dry and harassing, and the fever gradually more intense and continual. For these Mr. R. was bled several times; cups, leeches, and blisters, were in succession applied to the chest, and occasional emetics prescribed. This plan was persevered in for three weeks, when, finding that Mr. R. was not benefited by it, and that his disease was assuming the same march as that which had proved fatal to his brothers, I resorted to mercury, in order, if possible, to arrest its progress. The gums soon became affected, and the salivation was kept up for six weeks. But from this powerful revulsive no benefit resulted. So far from this, indeed, the symptoms were much aggravated. The pulse was now 120 in a minute, the skin dry, cough frequent, expectoration very copious. Night sweats soon supervened; the lower extremities became œdematous, the debility extreme, and exercise occasioned difficulty of breathing. Under these circumstances Mr. Roberts was sent to the country, where he remained all summer, taking gum arabic and milk for nourishment, occasional purgatives, antimonial preparations, and squill.

When he returned from the country, he appeared worse: the fever had assumed the hectic character, the nocturnal sweats were more copious, his debility was greater than when he had left the city, and his features were so much altered that I did not recognise him. Milk was now discontinued, and nourishing food ordered; Balsam Copaiba in large doses was administered, and its cathartic effects prevented by opiates. This remedy had hardly been used two weeks, before the symptoms were in a great measure amended. The cough was better, the expectoration improved in appearance, the nocturnal fever less severe, and the sweats less copious. The balsam was continued three months, when a cure was effected.

At my suggestion, young Roberts abandoned the sedentary business of silversmith, which until that period he had followed, and adopted the active life of a farmer.

Three years have now elapsed since Mr. Roberts' first attack; and, although he has suffered from intermittent fever, and last spring from the influenza, his health is as good, and perhaps better, than before the severe attack in question.

Remarks.—It must be evident to every one that in this, as well as in the two preceding cases, the balsam copaiba was of the most decided benefit; as it put a stop to an irritation of the mucous membrane of the lungs, which, had it been allowed to continue much longer, might, owing to the predisposition of the patients arising from their temperaments, have occasioned the formation of tubercles, and ended in phthisis. For it is a well-established fact, that tubercles are, in almost all cases, the result of neglected inflammations of this membrane.

Case VII.—J. E., about thirty-five years of age, of a strong constitution and bilious temperament, and by profession a mariner, was taken, whilst on the coast, with the usual symptoms of pulmonary inflammation. For the first four days, little or nothing was done to remove the disease; so that, when he came under care, (February 1826,) I entertained fears lest the inflammation had already progressed too far to be arrested. The pain was very considerable, the pulse strong and full, the oppression great, the cough almost continuous, and expectoration bloody. To remove these symptoms, the lancet was very freely and repeatedly had recourse to, warm cataplasms applied to the painful part, antimonials administered, &c. and the lowest possible diet enjoined. After a few days, the force of the attack appearing somewhat lessened by these means, a blister was applied to the chest, the antimonials continued, and occasional cathartics prescribed. This plan being persevered in for some weeks, the heat of the skin abated; but still the pulse was quick, particularly at night, the pleuritic pain was not entirely removed, and the cough was troublesome, and attended with a copious expectoration of yellow or greenish matter. Swelling of the feet and face supervened, and, upon the whole, the case appeared a very unpromising one.

The gastro-enteric apparatus, however, appearing in good condition, as indicated by clean tongue, appetite, no thirst, and regular bowels, the Balsam of Copaiba was prescribed in the usual way; opiates were given to procure sleep; and, to obviate the extreme debility of the patient, milk and barley water, with a small portion of toasted bread, was allowed twice a-day. Tartar-emetic ointment was likewise ordered to be rubbed on the chest, to remove the pain remaining there; and produced a small crop of pustules.

Under this plan of treatment the patient continued about five weeks, and at the expiration of that time was considered so much improved in all respects, as to be allowed to use a more nourishing diet. The pain being still somewhat troublesome, external revulsives, and the balsam, were advised to be continued, and in a very short time succeeded in removing all traces of the disease. J. E. has since left this country in perfect health.

Remarks.—Although, in the treatment of this case, I did not avail myself of the aid of the stethoscope, I think it may be affirmed that I had to combat a conjoint inflammation of the pleura and of the mucous lining of the lungs; which, not having been arrested in the outset, had passed to a chronic state, and would, unless interfered with by proper means, have conducted the patient to the grave, with the usual symptoms of phthisis pulmonalis. Indeed, so unfavourable was my prognosis of the case, that I requested one of my most experienced medical friends to visit him once or twice with me, and his opinion corroborated mine as to the precarious situation of the patient; so true it is that physicians are very apt to be mistaken in their predictions respecting the issue of the most desperate case. Whether or not my opinion will be supported by that of my practical readers, I am disposed to attribute a considerable agency in this cure to the copaiba; as the benefit seemed to succeed closely its exhibition, and the case seemed closely allied, in all that relates to the mucous inflammation, to some others in which there could be no hesitation as regards the efficacy of this remedy. I would not, however, be thought to overlook the aid that was derived from the tartar-emetic ointment. To it, indeed, we must refer the removal of the pleuritic irritation.

Other cases might be adduced in confirmation of the advantage that may be derived from a judicious use of balsam copaiba in chronic inflammation of the mucous membrane of the lungs; but the fear of fatiguing the readers of this Journal, and extending beyond proper limits this already long article, compels me to restrict myself to these I have detailed. On some future occasion I shall resume the subject of this remedy, and offer some observations on its use in affections of the other portions of the same membrane.*

ANEURISM.

Observations on Diffused Aneurism. By —— DICKINSON, Esq. Surgeon of the MACCLESFIELD DISPENSARY.

THERE are few cases in surgery which require more accurate discrimination, or more decisive and prompt treatment, than Aneurisms; and there are few cases, happily, over which modern science has cast more light, or in the management of which the triumph of our art has been more conspicuous. But, vast as has been the improvement of this branch of surgery from the time when JOHN HUNTER, guided by scientific principles, first devised his new mode of operation, to the period when Mr. WARDROP revived and perfected the method of *ultra* ligature, still there is much scope for investigation upon this interesting subject.

The points to which I wish to call attention are, first, the very rapid and destructive effects produced by this disease upon the bony structure of our frame; and, secondly, the question as to the proper mode of treatment in those cases where, from neglect or other circumstances, the disease has passed through its simple form, and, by bursting and discharging its contents into the intermuscular spaces or cellular structure, has assumed that state which has been denominated Diffused Aneurism.

That the constant pulsation of an aneurism is capable of causing the absorption of bone, must be familiar to every one; but the shortness of time in which that effect may occasionally be produced, I am inclined to believe is not so generally known. I here beg to remark, that there is a peculiarity in our system with respect to the influence of arterial pulsation upon bone, which is apt to escape notice from its constant occurrence: it is not, however, of much practical importance, but may serve to prove the admirable wisdom of those laws which govern our corporeal economy. Though the pulsation of an aneurism will excite absorption of bone, yet the same result is never discovered from the continual beating of an artery when in close *natural* proximity with bone: for instance, the arteria meningea media frequently runs through a bony channel in its course, and, from determination of blood to the head, must often act with much force against its osseous boundary, yet we never find absorption of bone the consequence. The like observation will apply wherever an artery passes through a bony canal. It would seem that our constitution is guarded against the evil influence of natural operations, though similar actions will cause disease when applied in situations, and under circumstances, contrary to the general order of our frames.

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* North American Medical and Surgical Journal.

Absorption of bone has been considered an ordinary, but slow, effect of aneurismal pressure; but, in a case which I shall relate, the complete destruction of four inches of the fibula was accomplished in a very few weeks. This circumstance demands notice, as it may prevent surgeons from allowing delay of operation whenever the disease is known to exist. There is also another motive for promptitude, deducible from the same case, namely, the short interval which sometimes elapses between the first formation of the disease and the period when it assumes the character of diffused aneurism. This last reason for vigorous measures may not, perhaps, at first sight appear very imperative; but I trust I shall be able to establish the fact that the most important results to the patient depend upon the disease being met in its early and simple form.

In the instance I shall mention, the term of a few weeks witnessed the commencement of simple aneurism, and its termination in diffused aneurism. That such rapid progress is not generally understood to be a character of the disease, I may be allowed to presume, from the circumstance of Sir ANTHONY CARLISLE having, in a case reported in the 11th volume of the Lancet, expressed his disbelief of a tumor being diffused aneurism, from the account of its early rupture; and yet that rupture was not at so early a period of the complaint as in the case which I have to record. To the case in the Lancet referred to above, I shall have occasion to return presently. My immediate object is to discuss the question of the safest and best plan when simple aneurism has become diffused.

When, then, we find the walls of the sac have given way, and blood is extensively diffused into the limb, what are we to do? That the vital powers of a limb are much oppressed by an extensive engorgement of its intermuscular and cellular spaces, every one must have observed; that gangrene or sloughing not unfrequently occur, must be allowed. Shall we then render such termination much more probable by tying the main trunk of the artery, thus almost annihilating the vitality of the part? I think the general answer will be in the negative. Moreover, there are formidable dangers, even should we be fortunate enough to preserve the life of the limb; for, after the ligature of the artery, a partial circulation is established, by which a return of a pulsatory action is effected in the sac: this, in simple aneurism, is of little consequence, as the supply of blood is not sufficient to prevent coagulation of its contents and obliteration of the sac. In diffused aneurism, however, the case is widely different: there the blood is poured out into a space without definite boundary, unless the external integuments be considered as such; and though it may be objected, that when the limb will no more the effusion of blood will cease, yet have we not great reason to fear, that, when the pressure is sufficient to block up the mouth of the bleeding vessel, or to compress its trunk, the circulation will also be suppressed in the other vessels which have to carry on the life of the part? and if so, how much greater is the risk of gangrene. But suppose the case to be altered from this less fearful state of diffused aneurism, to that in which the sac has burst, or has been opened externally, here the danger is still greater; for we have before us the hazard of a fatal hemorrhage, unless by external pressure, or the tourniquet, the flow of blood be commanded. It need scarcely be remarked how little chance of life a limb would retain under such circumstances. In several instances, the patient has fallen a sacrifice to the well-intended attempt to preserve the limb; and in numerous cases amputation has become requisite, from the unrestrainable bleeding, at the time of operation, or in a few days after. This misfortune occurred in the case of Sir Anthony Carlisle, already referred to.

From all these circumstances, it appears to me to be a question well worthy the consideration of the profession, whether amputation be not, in almost every instance of diffused aneurism, the safest and most proper remedy. For the view here taken, I must confess myself much indebted to an anonymous correspondent in the Lancet, volume 5th, No. 9, whose arguments had much influence in deciding the mode of treatment I have now to narrate.

On Monday evening, March 27th, 1827, I was requested by a surgeon to see a case of tumor, which he supposed to be fungus hæmatodes. He stated that it was situated upon the upper and outer part of the left leg; that he had opened it, and that some hemorrhage had ensued, together with the discharge of a quantity of brain-like substance. Upon the following morning I saw the patient, a little girl about fourteen years of age, and found the limb generally distended from the knee to the ankle, with a considerable tumor upon the part mentioned. Upon introducing my finger into the opening which had been made into this tumor, I found it to be formed by a large bag of coagulated blood, through which I could feel the posterior part of the tibia very slightly covered. On withdrawing my finger, there was a profuse gush of coagula, followed by a stream of arterial blood. There could be no doubt that the disease was diffused aneurism of the peroneal or posterior tibial artery.

The account given was, that the girl had complained of aching pain of the leg for twelve or thirteen weeks past, which was considered at first what is popularly called *thrift*. When the swelling was perceived, it was mistaken for incipient abscess, and fomentations and poultices were applied for the purpose of promoting suppuration. She had been prevented from walking for about six weeks. An incision was made into it on the 8th of March, when there was a discharge of about two table-spoonfuls of blood. On the 14th, a fresh incision was effected, when a large bleeding followed; and upon the 21st the tumor burst externally, and a profuse hemorrhage was the consequence, which continued in a lesser degree two nights and a day, and was at last checked by a tent of lint. On the 27th, the wound was enlarged, and a violent bleeding ensued, which was with great difficulty restrained. The surgeon assured me he had never felt any pulsation; but at a subsequent period the little patient stated to me that the swelling had " at times panted like her heart."

As the poor child was much reduced by these repeated hemorrhages, and as a more violent bleeding might at any moment occur, no time was to be lost, and I immediately declared that ligature of the artery, or amputation of the limb, ought to be performed that very day; but, as such a measure might appear abrupt in a case which had not hitherto alarmed the friends of the patient, I requested a consultation with my friend Mr. Cockson, who in a short time joined us. In our consultation it was considered that, owing to the very extensive extravasation of blood into the intermuscular spaces, and the feeble state of the girl,—taking into account, also, the unfavourable results of several operations of ligature of the artery in similar cases in London, Portsmouth, and elsewhere,—it would be safer to amputate than to attempt to save the limb. To this determination we were led by the conviction that such extensive engorgement would require much vital power to support the consequent suppuration, even in a limb whose circulation was uninterrupted, but that, when the main trunk was tied, in all probability gangrene would ensue; besides, as there is usually a partial return of circulation after the operation of ligature, here we had great reason to fear that such returning circulation would cause an unmanageable hemorrhage, by which the patient would either be drained to death, or amputation would be rendered unavoidable at a period when the constitution would be in a weak and irritable condition. From these considerations amputation was decided upon, and immediately performed. The vessels of the stump were found healthy.

Upon examination of the limb, the saphænus nerve was seen tightly stretched over the gastrocnemius, upon the separation of which muscle from the condyles of the femur, a large bag was discovered filled with coagula, mingled with a brainy matter, to the amount of nearly a quart. Nothing like the regular tissue of a sac was found, but the surface of the muscles assumed more the appearance of the cavity of an old ulcer or abscess. At that part of the tibia to which the head of the fibula is attached, only a slight shell of bone was left; and, upon a further examination, it was perceived that the entire cylinder of the fibula had been destroyed to the extent of about four inches. The brainy substance we supposed to have been formed by the admixture of the vestiges of the bone with the coagulable lymph of the blood. One circumstance may be noted as confirmatory of the accounts given of this disease: though the bone had been so extensively absorbed, not a single drop of matter had been secreted in the process.

Upon tracing the vessels, the disease was found to have been situated in the course of the posterior tibial artery, the superior ruptured portion of which was seen loose in the sac. The lower portion was not discovered.

At the time of writing this account, the little girl is doing well, and the stump nearly closed.

Macclesfield; April, 1827.

Successful Case of Ligature of the Right Subclavian Artery, for Axillary Aneurism. By Dr. ARENDT, Surgeon to the ARTILLERY HOSPITAL, Petersburgh. (Communicated by ROBERT LEE, M.D.)

WHEN at Petersburgh, in the month of June last, I was invited by Dr. Arendt, chief surgeon of the Artillery Hospital, to be present at the operation of tying the right subclavian artery for axillary aneurism. The patient was about thirty years of age, a clerk in one of the government offices, and had enjoyed very good health prior to the period when the pulsating tumor appeared in the right axilla, and which was about the beginning of the month of May. The disease was not attributed to any violence inflicted upon the arm, but appeared to be of spontaneous origin.

The operation was performed by Dr. Arendt on the 6th of June, 1826, in the presence of nearly all the distinguished professional gentlemen of the Russian metropolis; and it excited much general attention, from being only the second case where the operation of tying the subclavian artery had been attempted in the empire. When the young man was laid upon the table, and properly supported by pillows, an opportunity was afforded me of examining the state of the axilla and arm. There was a strong pulsation in the armpit, under the pectoral muscle, and behind and above the clavicle; and to such an extent did it exist in this latter situation, that the greater number present suspected that the subclavian artery was involved in the disease. The arm was not swollen, and the pulsations of the radial artery could be felt at the wrist, though weaker than in the left side. The patient complained of pain in the aneurism, and of a disagreeable numbness and tingling sensation in the whole extremity; and his sleep for some time had been much disturbed by frightful dreams, and strong throbbings of the arteries of the head.

The incision in the integuments was begun about three-quarters of an inch from the sternal extremity of the clavicle, and carried about three inches outward parallel with and closely along the upper edge of that bone. The platysma-myoides, and subjacent cellular membrane, were divided by means of a director and scalpel; and the remaining parts of the operation were effected by the point of the aneurism-needle and the forefinger of the operator alone. When the connexions of the artery with the surrounding parts had been separated, its pulsations could be felt at the point where it issued from behind the scalenus anticus muscle. The depth of the wound was so great, and the opening so narrow and confined, that it seemed utterly impracticable by any means to pass a ligature around it. Many long and violent attempts were made to accomplish this with a strong needle, similar in principle and form to the *aiguille a ressort* of Desault, and the more recently invented needle of Mr. Bremner, but without success. At one time, when the artery was supposed to be over the bend of the needle, it was found that the pulsations in the axilla were not arrested by compression of this cord, which was supposed to be a mesh of the fibres of the scalenus anticus muscle; and consequently further attempts were required to inclose the vessel. At last the needle was actually passed behind the artery, and, when the ligature was tied around it, the pulsations of the aneurism and radial artery immediately ceased, and a sensation of numbness was at the same time experienced in the arm.

During the operation, the hemorrhage was very trifling indeed; not a vessel was cut which required to be tied. The patient was upon the table an hour and ten minutes. *The ligature was as thick as common whip-cord,* and the two ends, after it had been firmly tied round the artery, were left hanging out of the wound. The edges of the wound were brought together by slips of adhesive plaster, and covered with charpie.

On the sixteenth day after the operation, the ligature came away, and the pulsations in the axilla had entirely disappeared. Except a slight febrile attack on the second day after the operation, for which he was bled twice, no disagreeable symptom arose during the after treatment; and in four weeks the wound was completely closed, and the perfect use of the arm regained.

Dr. Gibbs was the first surgeon at Petersburgh who attempted to apply a ligature round the subclavian artery, and he has related a successful case in the Transactions of the Medico-Chirurgical Society of London. The other great arteries have likewise repeatedly been tied with success in Russia. Out of eight cases of ligature of the external iliac for aneurism, five of the patients were restored to perfect health. The carotid has only been tied once, and the result was fortunate. The femoral has been tied upwards of twenty times, and a large proportion of the cases has ended in the complete recovery of the patients.

2, Upper John-street, Golden square;
April 23d, 1826.

Case of Axillary Aneurism, in which a Ligature was applied to the Subclavian Artery, and in which a Gangrenous Condition, both of the Upper and Lower Extremities, supervened. Treated by Mr. BRODIE, at ST. GEORGE'S HOSPITAL.

JOHN HERBERT, æt. fifty-six, a countryman, of florid complexion and good constitution; admitted March 4th, 1823. He has had aneurism of the axillary artery on the left side about two months. It occurred spontaneously, and, a fortnight after he had observed a small swelling, the pulsation became perceptible in the tumor. He has had very little pain, and has suffered scarcely any inconvenience from the swelling, which is about the size of a hen's egg, or rather larger, of an oblong shape, in the direction of the artery; the tumor gradually fading off at each end, the surface being smooth and nearly uniform, soft and partly compressible, not painful to the touch; situated just at the edges of the pectoralis and latissimus dorsi, so that the whole of the tumor can be felt.

He was bled, March 5th, to eight ounces, and took some opening medicine.

March 7th.—Soon after twelve the operation was performed. An incision was made along the upper edge of the clavicle, and one small artery was tied. The external jugular vein was tied in two places, and divided between the two ligatures: one of them slipped off afterwards, but this did not cause much bleeding. The subclavian artery was then tied, by means of Weiss's needle, with a ligature of two threads. The operation was performed with great facility, the whole of it being completed in twelve minutes and a half. The pulse at the wrist was immediately stopped; the power of motion was not at all impaired; and he complained of no numbness, though a sensation was felt to extend down the arm when the nerves were touched in the operation. After the effects of exposure had gone off, the warmth of the arm was natural, and appeared to be exactly equal to that of the other: it was, however, wrapped in flannel.

Vespere.—The tumor diminished to half its former size, and apparently harder. Complains of pain in the bowels.

℞. Pulv. Ant. gr. iij.; Ext. Papav. alb. gr. vj. M. h. s. s.

March 8th.—Arm warm; no pain in the shoulder.

Haust. Sennæ bis.—℞. Haust. Salin. ℥ jss.; Liq. Ant. Tart. m. xij. M. sextis horis.

Vespere.—Tongue rather furred, and dry; skin heated, and not moist; pulse ninety-four. He has suffered considerably from pain in the bowels, which have not been open since the 6th.

Enema commune statim.

The glyster was repeated at eleven P.M.; after which he had one motion, and was much relieved.

9th, *(second day.)*—Has not had a very quiet night, on account of the irritability of the bowels. Tongue thickly coated with brown fur, with white edges; breath fetid; head heavy and dull; no pain in the arm. Pulse 104, full, and rather hard. There has been a good deal of oozing from the wound.

Repetatur Enema, nine A.M.

Vespere.—Much relieved by three motions. He has been in a profuse perspiration during the afternoon. Pulse ninety-eight, soft.

At half-past twelve at night, he was suddenly seized with acute burning pain, extending down the whole of the arm to the palm of the hand, lasting three or four minutes, and followed by a rather severe rigor of twenty minutes' duration. He took twenty drops of laudanum. After the rigor he felt hot and dry before the profuse perspiration returned.

10th, *(third day.)*—He passed a pretty comfortable night after the perspiration came on. Tongue foul. Pulse eighty-four, soft, and regular. The wound was dressed with dry lint: it was sloughy, the sloughs being of a dark colour, and affecting part of the skin as well as the cellular membrane; with a slight inflammatory blush surrounding the wound. Still, however, he has had scarcely any pain, and the affected limb has been warm the whole time.

Haust. Sennæ mane.

11th, *(fourth day.)*—Has had a pretty good night, without any more shivering. Bowels still uncomfortable; and he complains of his medicine. Omitt^{r} Haust. Pulse ninety-two, full, but not very hard. Nine A.M. V.S. ad ʒvj. Blood highly buffed, but not at all cupped. The wound was dressed with T. Benz. C. though sloughs did not appear to be extending, nor was the shoulder painful.

Soon after the dressing, another rigor came on, (at half-past two P.M.) with slight pain and numbness of the arm. It lasted about a quarter of an hour, but scarcely checked the copious perspiration in which he has lain since the afternoon of the 9th.

Six P.M.—The pulse having risen in force, though not in frequency, eight ounces of blood were taken, (ordered when the rigor came on.) This blood also was much buffed, but not cupped. Bowels open twice. His right elbow has become much swollen, tender and painful, apparently from rheumatic inflammation, to which he is subject.

12th, (*fifth day.*)—Has had a very restless and unquiet night, not relieved by two doses of laudanum, of forty drops each. He had a third shivering fit at three o'clock; has been rather delirious in the night, and has tried to rise from bed, moving his arm considerably. A fatal change has taken place in his countenance, which is sunk and anxious. Pulse 120, small, and irritable; perspiration continues; arm warm as usual; tongue not so brown, but still loaded and clammy. Thirst increased.

Nine A.M.—℞. Pulv. Ant. gr. iv.; Opii gr. ij. M. statim.

One P.M.—He has slept a good deal, and is much under the influence of the opium. Is now sensible, but his thoughts wander when he is left to himself. Wound not more sloughy, but of a darker colour, and the sloughs do not seem likely to separate.

Linseed poultice applied.—℞. Calomel gr. ij.; Opii gr. j. statim, et h. s. repet.—℞. Mist. Camph. ℥ jss.; Træ. Digitalis m. x.; Træ. Opii gtt. v. M. quartis horis.

Nine P.M.—He has sunk considerably, and the countenance is still more alarming. Pulse 140 or 150, weak, and unsteady.

℞. Ammon. Carbon. gr. xx.; Aquæ ℥ j. M. secundis horis, cum Suc. Limonis recentis ℥ ss.—Omit. Mist. c. Digital.

He continued to sink gradually till two A.M. March 13th, when he died, five days and a half after the operation.

The body after death had the appearance of gangrene, the whole of the right arm, part of the left, and part of both legs, becoming quite livid and soft; and, on cutting into them, the muscles and other textures were found to be soft and putrid. The inner surface of the trachea also had a livid colour.

The subclavian artery was found to be plugged up for about half an inch on each side of the ligature, which had begun to ulcerate through the vessel. The inner surface of the aorta was rather more red than natural, and the subclavian vein was of a dark colour. No disease was found in the heart, nor in any of the large arteries; nor was any other appearance detected to which the death could be attributed.

It is remarkable that the gangrenous appearance was less distinct in the arm of which the artery had been tied, than in the other limbs.

Case of Aneurism of the Popliteal Artery, in which the Femoral Artery was tied with success, by J. T. SIMPSON, Esq. *With the Dissection of the Limb nearly two years afterwards, the Patient having died of Aneurism of the Aorta, which burst into the Pericardium.* Communicated by THOMAS ROSE, Esq.

JOSEPH HANCOCK, twenty-eight years of age, a soldier in the Coldstream Guards, by trade a brass-founder, was admitted into the regimental hospital, in the beginning of November, 1804, with an aneurism of the popliteal artery on the right side. About two months before, whilst he was in camp with the first battalion, he complained of pain and stiffness in his right ham, and, on examination, a small aneurismal tumor was then perceived. This gradually enlarged, and, at the time of his being received into the hospital, was of the size of a hen's egg. His knee was also stiff; his leg contracted, and slightly œdematous about the ankle. He did not recollect any cause to which he could refer the disease; but, when employed at his trade, he was in the habit of turning a large wheel with his right foot, which required considerable exertion.

On the 23d of November, the artery was cut down upon in the middle of the thigh, by Mr. Simpson, and secured by a single ligature. Every thing went on favourably, and on the 14th January he was dismissed from the hospital, the leg being supported by a flannel roller, which he was directed to wear for two or three months. In the beginning of April, no remains of the tumor could be perceived, the leg was in all respects as strong as the other, and he was sent to his duty.

From that time till the 13th August, 1806, he continued perfectly well, and, when not on regimental duty, employed himself as formerly at his trade. On that day, about five in the afternoon, whilst standing by the vice in the workshop, where he had been busy during the day, he was suddenly seized with faintness, and, leaning down his head on the vice, he observed to some of the workmen near him that he felt very ill. He had scarcely said so, when he dropt down, and, in less than five minutes, expired.

I had seen him about a week before his death, and had examined him particularly. His right leg was as muscular and strong as the other; and he told me that his health had never been better, and that he was as able to do his duty as in any former part of his life.

I examined the body on the 15th of August. The pericardium was found to contain about a pint of serum, and nearly an equal quantity of coagulated blood. The opening through which this had escaped was found in the anterior part of the aorta, about three-quarters of an inch beyond the semilunar valves. It was only large enough to admit the end of the smallest sized probe. On cutting into the heart and aorta, the left ventricle, particularly towards its apex, was found to be much thinner than natural, not appearing so strong as either of the auricles. Immediately beyond the valves, the internal coat of the aorta was much thickened, and thrown into rugæ, having a dark opaque colour, from effused blood between this and the muscular coat. In this diseased portion of the vessel, which was upwards of an inch and a half in length, two aneurismal pouches were formed,—one on the anterior convex side, large enough to contain three-quarters of an ounce of blood; the other directly opposite, and about half that size. On the internal surface of the larger sac, at its upper part, where it was most exposed to the impetus of the blood, a small round depression was observed, nearly two-tenths of an inch in diameter, having jagged edges, and being distinctly produced by ulceration. In the centre of this was the small opening which communicated with the pericardium. The same thickened and corrugated appearance was met with on the vessel, at the upper part of its arch, where the three great trunks are given off; and a similarly diseased spot, about the size of a shilling, was found in the aorta descendens, three inches below the arch. Ossification had not taken place to any extent in the aorta, but some opaque white specks were seen in different parts of its coats.

The other vessels, and the viscera of the thorax and abdomen, were free from disease.

The thigh was injected from the external iliac artery. The femoral artery, after giving off the profunda, which was somewhat larger than common, continued its course below the sartorius, supplying branches to the muscles in its neighbourhood, particularly towards the middle of the thigh, where a greater number of small vessels than usual were sent off from it. It then terminated abruptly, and was obliterated for the space of one inch, where the ligature had been applied in the operation. Below this it received large branches on each side from the vessels coming from the profunda, and passed, as usual, through the tendon of the triceps into the ham. The diameter of the artery was but little diminished, even at the very point of its termination, where it formed a complete cul-de-sac; and there was no perceptible difference in its size where it again admitted the injection. A very free communication took place between the popliteal artery and the branches of the profunda, and also between these and the artery below the knee. One of the anastomosing branches, formed by vessels coming from the profunda uniting with others from the poplitea, became a trunk as large as the upper part of the ulnar artery. It run down, deep-seated between the outer and inner ham-strings, immediately behind the poplitea, and divided into two branches, one passing over each of the condyles of the femur to join the principal artery below the remains of the aneurismal sac. The popliteal artery, on entering the notch between the condyles of the femur, sent off a very large branch towards the outside of the knee, joining the anastomosing vessels there, and immediately afterwards became obliterated for the space of two and a half inches, where the aneurismal sac had been situated. This space was supplied by a dark-coloured ligamentous substance, which united the two ends of the vessel. The same substance occupied the place where the artery was obliterated in the middle of the thigh. On again becoming pervious, the artery, for the space of an inch, was not larger than the tibialis antica. It then received the anastomosing vessels from the outer and inner condyles, and divided, as usual, into the two tibial and the peroneal arteries.

Observations on Aneurism, particularly with Reference to the Application of a Ligature beyond the Tumor; being an Abstract of a Clinical Lecture lately delivered by Mr. SHAW, *at the* MIDDLESEX HOSPITAL.

IT would appear, from numerous facts, that, in the greater number of cases, it is only necessary to impede the current of blood through an aneurismal tumor, in order to produce coagulation. But even tying the main trunk leading to the aneurism is not always successful in effecting this, although an apparently slight obstruction to the direct current has been sometimes sufficient.

This leads to the consideration of a very interesting question,—viz. the possibility of causing the blood to coagulate in the sac by tying the artery beyond the tumor; a question which some of you may recollect we also discussed in a lecture last January. Before the operation on the external iliac artery was proposed by Mr. ABERNETHY, aneurism at the groin was considered, both in this country and on the continent, as a fatal disease, unless it could be cured by pressure. It is true that BRASDOR, professor of surgery in the old School of Medicine in France, proposed to tie the artery below the tumor. DESAULT also recommended this operation; and DESCHAMPS tied the femoral artery in the middle of the thigh for an aneurism at the groin, but the patient died. Although the operation was then given up in France, we have only to read Deschamps' own account of the operation to be satisfied that it should not be taken as a precedent.

Many years after this, Sir A. COOPER tied the femoral artery between the epigastric and the profunda, for an aneurism of the external iliac. The aneurismal tumor diminished in size, the ligatures came away, and every thing promised well. The patient went to the country to recruit his health, but he died suddenly, and it would appear from the aneurism bursting; for, although the body was not opened, a quantity of blood was observed in the cellular membrane of the parts about the pelvis.

It is not improbable that the aneurism in this case might have subsided, had it not been very large before the operation. On considering the probable effect of so directly obstructing the great current of blood through the main artery, we must admit that this operation was founded on just principles, and not to be compared with that performed by Deschamps. But the general opinion was against the operation; and this was expressed, about that time, in very strong language, by the late ALLAN BURNS, of Glasgow. He says, "that there is no point in the treatment of aneurism which ought to be more decidedly reprobated than this: it is absurd in theory, and experience proves that it is ruinous in practice."

This was in 1811; but, notwithstanding the failure of these operations, Mr. BELL used, in his lectures at that time, to insist on the operation being good in principle, and to argue that the facts of anatomy were sufficient to show the cause of these operations having failed. Some of you may remember that, while I was a teacher in Windmill-street, in demonstrating the arteries, and particularly the inosculations of the vessels about the shoulder, I always dwelt on this question. Indeed, the following extract will satisfy you that I have been long interested in it. It is part of a criticism on some continental works on Aneurism, and is inserted in the first Number of the Quarterly Journal of Foreign Medicine, published in 1818. After describing the well-known operation of Deschamps, I remarked, "It will at once be allowed that the question of tying the artery below the tumor cannot be fairly judged of by this case; for an operation so performed, although above the tumor, would have proved fatal. The French surgeons are unanimous in objecting to this operation, (tying the artery below the tumor:) they say that the tumor is rapidly enlarged by it; but a case has occurred in this country where, after a similar operation, the tumor rather diminished." (Sir A. Cooper's case.)

"The question is not now interesting in considering aneurisms at the groin; but it is particularly so in aneurisms of the subclavian artery. The attempt to cure aneurism of the axillary artery by tying the subclavian, has been frequently made both in England and France. Some time ago the operation was successfully performed by Dr. POST, of New York, a gentleman of great talent, and whom we recollect having seen in this country." (Since the paper from which I quote was written, several cases have been successful.) "But how often has this operation failed,—and not so much in consequence of tying the artery, (I here should have said an artery near the heart,) as from the circumstance of there being so many large branches going off from the point at which we must tie it. One cause of our great success in the operations upon the carotid and external iliac arteries, is indubitably the fact of there being no branches going off near to the part where the artery is generally tied. In axillary aneurism, we may tie the artery below the tumor; and, if this be unsuccessful, we may either amputate the arm at the shoulder or tie the subclavian above the tumor; for we have no dread of the ligature of the artery below the aneurism producing the rapid enlargement which the French ascribe to it. Their whole data are taken from Deschamps' operation. We had lately under our care a patient with axillary aneurism, upon whom it was proposed to perform this operation; but the patient being swayed by the opinion of another surgeon, procrastinated so long that the tumor burst, and he died immediately."

This case occurred when I was a very young surgeon. I sent the patient to Mr. Bell: he proposed to tie the artery below the tumor; but the patient, after consulting with Mr. Lynn, would not submit to it.

You may readily imagine that a question of such importance as this, and on which I had written in 1818, has not been forgotten by me: I have indeed taken much interest in the cases in which the operation of tying the artery beyond the tumor has been performed. It is said that there have lately been four instances of this kind, and that three of them have been fatal; while, in regard to the fourth case, (the only one that has survived,) there is reason to suspect that the disease was not aneurism. Were we to rest satisfied with this statement, we should at once conclude that the principle of the operation was bad, and that it ought consequently to be abandoned. But, so far as we have been able to learn, we would rather say that none of the three fatal cases in any way disturbs the question of the principle on which the success of the operation depends.

I presume that the statements made in relation to these cases are correct: if not, it is probable that I shall be set right, as I propose to publish them in the work on Aneurism in which I am now engaged. As I intend to take that opportunity of going minutely into an examination of the first case, (in the Medico-Chirurgical Transactions, July 1825,) I shall at present only observe that, if the delineation of it given by the surgeon who operated be accurate, it is of itself almost sufficient to show that the disease was not aneurism. I shall then also undertake to prove that aneurism of the lower part of the carotid is a very rare disease, and that, when it has taken place, it neither resembles the drawing in appearance, nor in any of its symptoms corresponds with the history of the case alluded to. If I succeed in showing this, then the carotid having been tied in this instance will weigh neither in favour of nor against the proposed operation of tying the artery beyond the tumor.

In the second operation to which I have alluded, the femoral artery was tied in a case which appears to have been similar to that of Deschamps, and analogous to those cases for which the ligature on the external iliac artery has been so successful: I therefore assume, with respect to this likewise, that it was not a case by which we are to judge of the merits of the operation.

The next case is a very extraordinary one. A pulsating tumor in the lower part of the neck was supposed to be an aneurism of the root of the carotid artery. On the 10th of December, an operation, with a view to tie the common carotid, was performed. Eleven days after this, the public were told that the operation had been so completely successful that the patient would soon be able to go home; and, on the 24th of March, a surgeon, whom the operator had assisted on the 1st of March to perform a similar operation, says, in relation to that gentleman's cases, " I may simply remark, that they were cases which, in pursuance of prevailing opinions, would have been left to inevitable death: Mr. Wardrop has therefore the gratification of having saved the lives of two fellow creatures, as well as of having established a principle in the treatment of aneurism, the future benefits of which are almost incalculable." At this time certainly no man could have more apparent reason to exult in what he had done; for he believed that he had discovered the cause of a fatal disorder, and averted its effects by an operation: and, but for the extraordinary circumstances subsequently brought to light, every surgeon would have had cause to exult. The congratulation, however, was premature; for within a day or two of the date of the last so favourable report, the patient died; and, in the course of a short time afterwards, the other patient, (operated on March the 1st,) of whom a most favourable report is given on the 24th of March, also died.

Although it was reported that the tumor had subsided, and that the distressing symptoms were relieved by cutting down on the carotid, the fatal issue of both cases in so short a time might lead to the supposition that the principle of tying the artery beyond the tumor was radically bad: but, happily for the credit of the operation, the bodies were examined after death. In the first case, no aneurism of the carotid, nor of any of the great vessels, was found, but the heart was in that condition which is called hypertrophy. This is nearly the substance of the account published, and the statement was corroborated by a gentleman who had an opportunity of examining the parts carefully, and whom you all knew as a most intelligent and diligent student. But, what is still more extraordinary, the carotid, which had been supposed to be tied, was found entire, and without any marks of a ligature having ever been applied to it. The blood, to the day of the patient's death, appears to have passed as freely through it as through any other vessel. As far, therefore, as regards the question at issue, it is clear that this case can have no effect on it. We cannot, however, avoid expressing our surprise that a pulsating tumor in the neck, caused by irregularity in the action of the heart, should, after all that has been said and written on that subject, be mistaken for aneurism. I shall not attempt to account for the phenomenon of the carotid artery being found entire, nor for the good effects which are reported to have been produced by the supposed obstruction of the circulation through it.

In regard to the latter case, of which a most favourable report was given on the 24th of March, I have only heard that the patient died of hemorrhage since the date of that report.

I shall now recall to your recollection the case of Gordon the blacksmith, who lay in Clayton's ward. You may remember that, when this man came into the hospital, he had a pulsating tumor, nearly the size of a hen's egg, extending from under the sternal portion of the clavicle to the edge of the trapezius, and rising towards the thyroid cartilage. Before he came into the house, he had been taking mercury under the care of a person in the neighbourhood, his disease being supposed to be rheumatism; and, although it was said he had only taken a few pills, he was in such a state of salivation that, had an operation been proper, it could not have been performed at that time. However, there was little difficulty of ascertaining that the disease was not aneurism of the carotid, and there was every reason to believe that the innominata was affected. I will not at present enter into a discussion of the grounds on which I formed this opinion: I may, however, remark that the character of the pulsation in the right carotid and right humeral arteries exactly corresponding, and of its being different from that in the vessels of the left side, were the principal facts which led me to infer that the common trunk was affected. From the first, I determined that all we could do was to treat this patient on the depletory system. Some of you know that the unwarrantable conduct of strangers, who, although medical men, visited the patient clandestinely, made it difficult for me to pursue this plan of treatment; and, had not the attention which compassion for his situation led me to pay him, induced the poor patient to place some confidence in me, he would have probably yielded to the attempts which were repeatedly made to carry him to another surgeon, for the purpose of having the carotid artery tied. Having been informed of these circumstances, I told the patient, at one of our public visits, that an operation in his case was not to be thought of. You may remember his reply: that he would trust to me, and have nothing to do with the gentleman (whose name he mentioned) to whom he had been urged to go.

It is but justice to myself and other hospital surgeons to state this, that you may know to what we are in the present day subjected; for not only did these persons endeavour to destroy my patient's confidence in me, but, failing in that, they have since attempted to injure me in public estimation by a false statement of the case.

The tumor and the symptoms of dyspnœa increased; the pulsation in the carotid gradually diminished, and at length ceased altogether; but, notwithstanding this, the tumor continued to enlarge. The breathing became more difficult; and in the beginning of December it was evident the man was dying. His wife had an unfortunate horror at the idea of her husband dying in an hospital, and insisted on carrying him away, although the danger of his expiring on the road was pointed out to her. The poor man begged I would visit him at home. I saw him a few hours afterwards. His breathing was now very laborious; and, on calling next day, I found that he had expired suddenly: the people who were sitting by him having heard him groan, observed the tumor gradually sink and become flattened.

I regret that it is not in my power to exhibit to you the condition of the vessels; I have only been able to learn that the aneurismal tumor was, as I supposed, in the innominata, and that the right carotid had been obliterated.

But it is incumbent on me to satisfy you that it was not from indolence nor from carelessness on my part, that I am unable to prove this to you by an inspection of the aneurism. On first applying for leave to examine the body, his wife was not at home; and I therefore went again, to endeavour to obtain her consent. To my astonishment, I was told that it had been already examined by some young men, who had said to the friends that "it would be the same as if I were present." Hoping that the parts might not have been removed, I requested to see the body. On opening the incision, I found that the subclavian and carotid arteries had been removed; and now an old nurse whispered to me that she had allowed them to take *the substance* to my house, for me to see it. I confess I had little expectation that men who acted so unwarrantably in using my name would send the parts to me; and accordingly, in the course of the day, I discovered that the preparation had been immediately taken to another surgeon. I shall not mention the young man's name who was the principal agent in this most unprofessional transaction: I am happy to say he never was a pupil here.

I wrote to request that my colleagues and you might have an opportunity of seeing the state of the parts in a case in which we had been so much interested; but to this day I have not seen it, although several of my friends had an opportunity of doing so. This preparation has been exhibited before many persons as an example of an aneurism which might have been cured by operation.

Although it is impossible to look upon this transaction without some feelings of indignation, yet I trust that I shall not allow these to bias me in the discussion of this important question. Fortunately the opinions of those who think that an operation would have been admissible are placed on record; and as the only former occasion on which I thought it necessary to notice the systematic slander with which I have been assailed related to an important question with regard to hemorrhage after lithotomy, so now I enter on this discussion only because it may be converted to your instruction. The passages run as follows:—"Nothing further was done, excepting to order a chalk mixture or two for a purging which had supervened; and, being determined to remain no longer under this treatment, the patient left the hospital on the 4th December, intending to go to Panton-square: but it was too late, the unfortunate man survived only twenty-four hours after leaving the Middlesex Hospital, having been there about six weeks." "A more instructive dissection could scarcely be seen: it shows how much might have been done by an energetic surgeon, and how much might be sacrificed to timidity or something worse." "The success which attended Mr. Wardrop's operation of tying the carotid above the aneurism ought to have induced the illuminati of the Middlesex to have attempted a similar mode of treatment: they might first have tied the carotid, and, if that were found insufficient to have stayed the progress of the tumor, they should have afterwards tied the subclavian, rather than have given the man up to his fate. It will be seen, indeed, from the report, that, ten days previous to the patient's leaving the hospital, the carotid artery had become obliterated; and that fact was not unknown to Messrs. Bell and Shaw. The preparation is at present in the possession of Mr. Wardrop."

If tying the carotid or the subclavian in such cases is to be considered the proof of being an "energetic surgeon," I trust I shall never merit such a character. The mere operation of tying a large artery can appear a great and bold achievement only to those who are conscious of being deficient in anatomical knowledge, or *who have had the misfortune to attempt the operation without succeeding in its accomplishment.* The true test of skill consists in judging correctly of the time and circumstances under which such an operation ought to be performed.*

To say that both the carotid and subclavian should have been tied in the case alluded to, is so absurd, that, to combat this idea, it is only necessary to attend to the anatomy of the vessels. With regard to the carotid, indeed, the preparation which was taken from me—I had almost used a stronger expression,—shows that, although that vessel had been obliterated by the pressure of the tumor, and the current of blood consequently no longer passed through it, still this had produced no salutary effect on the tumor, for it rapidly increased, and soon afterwards burst. Nor is the case treated by me a solitary one. Sir EVERARD HOME has mentioned an instance in which the carotid became obliterated from the same cause; and there are two magnificent specimens in the Museum of the College, which I advise you to examine, as they are sufficient to prove that tying the carotid artery can have little or no good effect on an aneurism of the innominata.

I place before you a drawing from SCARPA, of an aneurism in the lower part of the trunk of the carotid; but this you see, instead of having formed an obscure tumor at the lower part of the neck, mounts as high as the angle of the jaw. I shall take another opportunity of proving that, although there is frequently a dilated state of the origin of the carotid in elderly persons, and which is not dangerous as a local affection, but only symptomatic of general disease in the arterial system, true aneurism of the carotid is a very rare disease, excepting at its separation from the subclavian, (being then in fact aneurism of the innominata,) or at its bifurcation. The connexions of the deep fasciæ will likewise show that, if aneurism should take place in the root of the carotid, the tumor must ascend towards the jaw, and form an external tumor, quite different in appearance from the drawing given in illustration of the case said to have been carotid aneurism, and alleged to have been cured by tying the artery beyond the tumor.* Indeed, from these and other considerations, I am led to believe that that case was not one of aneurism at all.

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* It has, I know, been said that I was *afraid* to perform the operation. This is true; but I was afraid only because I knew that the operation would be injurious. It is a most dangerous doctrine that, if the surgeon thinks his patient must die of the disease, he is therefore justified in performing any wild experiment, with however little prospect of success. At present there are some individuals among us who are endeavouring to acquire notoriety by practising operations the most desperate, and I hesitate not to say the most unwarrantable.

The operation of tying the artery beyond the tumor can be seldom available or proper even in cases of true carotid aneurism; yet, notwithstanding the late unsuccessful results, it should not be lost sight of in cases more judiciously selected, and under circumstances more favourable to its performance.

After lecture, one of the gentlemen present showed Mr. Shaw a plan which had been made of the arteries, on the dissection of the patient who had been operated on on the 1st of March, (Mr. LAMBERT's case.) He remarked that at first view it appeared somewhat similar to an aneurism; but, after finding that the tumor was described in the published statement to be only half an inch in breadth, he said this showed that it had only been such a dilatation as was frequently observed in elderly persons. He remarked that the circumstance of the channel through the artery having been obstructed, although it had been tied with "fisherman's silk," as in the other fatal case where the vessel remained pervious, proved the correctness of the general opinion, that not the carotid, but something else, had been tied in that instance. There was, he remarked, a curious anomaly in the history of these two cases. In both a pulsating tumor was said to have existed at the lower part of the neck; and in both the symptoms supposed to have been produced by these tumors were described as having been completely relieved by an operation: but, on dissection, a dilatation of the carotid, very different from true aneurism, was found in the one; while the other proved to be a case of disease of the heart, without any aneurism, and with but very inconsiderable dilatation. In the former the carotid was found to have been tied, and the consequent obstruction to the course of the blood through the vessel was stated to have had the same effect in mitigating the sufferings of this patient, as the mere cutting down to look for it had in relieving the symptoms produced by enlargement of the heart in the other!

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* Med.-Chir. Transactions, vol. xiii.

WOUNDS OF ARTERIES.

Case of Wound of the Brachial Artery, treated at the WESTMINSTER HOSPITAL, *by* MR. WHITE.

MR. WHITE was requested to see Thomas Taylor, who was a groom at Astley's Amphitheatre, and who had been bled by a druggist a few days previously. He was visited by Mr. White at the request of Mr. Ridge, an apothecary; and it was stated that the phlebotomist had accidentally wounded an artery. Frequent hemorrhage during the three following days, with considerable enlargement of the arm, sufficiently warranted the supposition. Mr. White requested that he should be forthwith sent to the hospital, which was not done for two days.

On August 4th the man was received, and on the same night considerable hemorrhage took place, which was restrained by compressing the subclavian artery until the arrival of Mr. White. The arm was now prodigiously swollen, both above and below the flexure of the joint, lividly red, and extremely painful on the slightest pressure, peremptorily forbidding any attempt at compression with pad and bandage. The orifice was plugged with a coagulum, which for a time appeared to restrain the bleeding.

Mr. White, from the previous history of the case and the existing condition of the arm, and also taking into consideration the great loss of blood which had occurred at intervals daily since the accident, stated his opinion that it was not only not safe to leave the patient to the chance of more hemorrhage during the night, but that the tense and exquisitely sensitive condition of arm, which he conjectured was gorged with coagulated blood, demanded an extensive division of the integuments, to procure immediate relief. A curved director was passed into the orifice, and conveyed under the integuments nearly its whole length upwards, and afterwards equally low downwards, making a free opening of eight inches with a curved bistoury. The subclavian artery was at the time compressed. Immediately on the division of the skin, several ounces of coagulum were let free, and rolled out without assistance; the rest was removed with a sponge and water: there appeared an accumulation of at least two pounds of coagulum. Pressure being removed from the subclavian artery, an instantaneous gush of blood immediately directed the operator to the wounded vessel, which was found, after a little separation of the surrounding parts, to be distinctly the brachial artery. A ligature was placed above the wounded point of the vessel, and, to prevent hemorrhage by regurgitation from the vessels of the forearm, another was placed below. The two ligatures, with the intermediate artery, included an inch of the vessel. The test of the security of the wounded vessel was the cessation of all hemorrhage when pressure was removed from the subclavian. The highly inflamed state and tension of the arm forbade any attempt at union by suture. A small quantity of dry lint was lightly, therefore, placed in the wound, and a soft bread poultice over the whole arm; which was afterwards supported on a pillow.

August 5th.—Pain in the arm much diminished; pulse 120, and feeble.

Six P.M.—Increase of arterial action. This continued till about four o'clock in the morning of the 9th, when the artery burst out bleeding: this was restrained by pressure applied on the subclavian artery. About nine A.M. Mr. White again put a ligature on the brachial artery, a little above the bleeding point. A dose of laudanum was given in some brandy, which was rejected by vomiting. Pulse in the opposite arm very feeble, but rose in a few hours. The patient now got some sleep. At four P.M. Mr. White saw him: pulse 120. Ordered a dose of cathartic medicine.

7th.—Has had some sleep during the night, and says he feels a great deal better. Pulse 110, and hard.

8th.—Has had but little sleep; complains of increase of pain in the arm; pulse 104; bowels open. The arm has returned to its natural colour, but is still very hard about the biceps muscle.

9th.—Has passed a restless night; great pain in the arm; bowels open, though the tongue is very much furred; pulse ninety-six, hard and full.

10th.—Has had a little sleep; pain continues; rather feverish.

Ordered Mist. Salin. ℥ viij.; Træ. Opii gtt. l. Capiat cochl. iij. ter die.

11th.—Has passed a good night; arm less painful; bowels have been freely opened; pulse ninety-six.

August 12th.—Has had a good night's rest; very little pain in the arm; wound beginning to slough; pulse 100; bowels not open.

Ordered Ext. Coloc. C. gr. viij.

13th.—The nurse, on removing the dressing this morning, discovered a large quantity of blood. Mr. White was immediately sent for. He found that the lower extremity of the vessel was the point from which the hemorrhage issued, and a ligature was placed upon it.

14th.—He feels a great deal of pain and heat in the arm.

Ordered Ext. Opii gr. j.

15th.—Patient feels better; has passed a quiet night; pulse weak and feeble.

16th.—Great pain in the arm, and throbbing about the wound.

Capiat Pulv. Ipecac. comp. gr. viij.

17th.—Much as yesterday. Pulse 104.

18th.—At four this afternoon, a slight hemorrhage came on, to the extent of about four ounces: the blood was venous, and ceased spontaneously. Pulse soon after rose from 96 to 120.

Eight P.M.—Pain still continues; pulse 110.

19th.—Feels himself a little better.

20th.—Continues better. Bowels confined.

Ext. Coloc. C. gr. viij.

21st.—Not so well. Bowels confined; pulse hard and quick; tongue furred.

Ordered Hydrarg. Submur. et Ext. Coloc. C. āā gr. v. fiant pil. ij. statim sumendæ.

22d.—Better in every respect; had a good night's rest; bowels freely opened; pulse full.

About eight P.M. the arm again burst out bleeding, when he lost thirty ounces. Hemorrhage restrained by pressure on the brachial artery. Mr. White being out of town, Mr. Wm. Lynn placed a ligature an inch above the bleeding orifice. Ordered Conf. Opiat. ℈j. Half an hour after this, a slight hemorrhage recurred, when Mr. Guthrie saw him; but the bleeding ceased on the application of a compress.

23d.—Has had no sleep last night. The patient throughout has had nourishing diet, with wine and brandy.

24th.—This morning about sixteen ounces of blood were lost. Mr. White instantly proposed amputation to the patient, as the only probable chance of saving him from another bleeding, which would most likely prove fatal. The patient consenting, the operation was immediately performed, during which but little blood was lost.

Ordered Træ. Opii gtt. l. in a little Cinnamon water.

Four P.M.—Feels very restless, not at all inclined to sleep.

25th.—Better. Pulse full and soft; has passed a good night; complains of but little pain in the stump; bowels rather relaxed; skin cool and moist.

Four P.M.—Has been purged five or six times since ten o'clock.

Ordered Pulv. Cinnam. comp. gr. xv. omni horâ.

August 26th.—Says he is better. Has had a good night's rest. Pulse full and soft; bowels regular; skin cool and moist; but little pain in the stump.

Eight P.M.—Diarrhœa returning.

Ordered Pulv. Rhei gr. x. in Aquæ Menth. Pip.

27th.—Has had a discharge of dark green coloured stools. Violent increase of the heart's action.

Ordered Hydrarg. Submur. gr. ij. et Ext. Opii gr. ss. sextâ quâque horâ.

28th.—Very much debilitated. Dressings removed from the stump: there is some union between the lips of the wound.

Four P.M.—Diarrhœa continues.

Ordered Mist. Cretæ ʒvss.; Confect. Opiat. ℈ij. M. capiat cochl. ij. quartâ quâque horâ.

Eleven P.M.—Ol. Ricini ʒij.; Mucil. Acaciæ q. s.; Aquæ Menthæ ℥jss.; Træ. Opii gtt. x. fiat haust. statim sumend.

29th.—Has had four very scanty evacuations during the night. Stump dressed to-day: has a favourable appearance.

From this period the patient's health and strength rapidly declined till he died.

This very interesting case having at the time excited considerable attention, and various contradictory statements having been published respecting many of the circumstances, we have procured notes of it from a gentleman who witnessed its progress, and sent them to Mr. White, requesting his permission to publish them if correct; and at the same time expressing our wish that he would favour us with any comment or observations on the subject. We are indebted to his politeness for the following reply:—

Mr. White's *Observations.*

The observations which I had an opportunity of making during the progress of Taylor's case are as follow:

The accident having occurred four or five days before he was received as my patient into the hospital, the man's mind had become excessively alarmed at the frequent recurrence of hemorrhage, added to the anxiety which he evidently saw expressed by those around him, and thus creating a very unfavourable impression on his imagination,—viz. that the accident, of which he had been made aware, was likely to terminate unfavourably. This unceasing mental excitement, with great loss of blood and considerable local pain, had rendered him unfit to undergo any surgical operation. The pulse was hurried and irregular, his tongue coated, the stomach irritable, with thirst and throbbing headache; and he had passed three or four sleepless nights. The local urgency presented by the state of the arm, combined with the danger of a postponed examination as to the return of hemorrhage, determined me, at twelve o'clock at night, to proceed in the manner above detailed.

On the following day, although the patient's countenance was less expressive of anxiety, yet it was far from having that quietude which I should have been gratified to have met. He had slept at intervals, and the arm was less painful. The peculiar character of the pulse, with which every practical surgeon is acquainted, and which he denominates *hemorrhagic,* was too evident at this early time; but it existed before the artery was tied, (I had almost said secured.) A throbbing heart, a pale face, with a peculiar acute angular expression, was never lost; and on the fourth day I was called in consequence of fresh bleeding from the wound. It had been restrained by the house surgeon; yet, not trusting to the now very sloughy state of the wound, I proceeded to remove the coagulated blood which filled the capacious cavity, and I found both the original ligatures firm in their places. After the repeated application of a warm sponge, this hemorrhage appeared to proceed from a point immediately below the upper ligature: I therefore passed directly under that point another, which put a stop to further bleeding.

Five or six days now passed away, the condition of the patient fluctuating as to general health, but no "laudable" suppuration was secreted in the wound; and although, on the whole, I considered him in a better state, yet he still was in a very critical situation.

When I did not expect it, (the patient being, as I conceived, somewhat improved in general health,) hemorrhage again took place; and, after a most minute examination, for it was, in the deep and sloughing wound, extremely difficult to ascertain the precise point where to dip the needle or elevate with the tenaculum, I succeeded in restraining further hemorrhage, by including with a ligature the vessel and a considerable portion of the surrounding spongy structure.

Early the next morning, I was professionally called away out of town. Hemorrhage again occurred; and Mr. WILLIAM LYNN placed a ligature on the brachial artery, above the point originally tied.

The next day, Sir A. CARLISLE and Mr. GUTHRIE saw the patient, and, from the exceedingly exhausted state of the man, they conceived that, independent of the improbability of a stump after amputation, under such circumstances, doing well, the exhausted state of the patient forbade that operation.

I was called to the man at noon two days subsequently, for a further hemorrhage had at that time happened, and fourteen or sixteen ounces had been lost before it was discovered. On my arrival, thinking that even in this worn-out condition of the patient, whose courage now and throughout had been the most unshaken, and although, from a previous consultation, he had been fully persuaded that his case was to be speedily fatal, yet, on being now told that the removal of the arm still offered him a chance of salvation, he cheerfully consented, and suffered the operation without an expression of impatience or pain.

The examination of the arm after amputation clearly showed that the brachial artery (not the radial or ulnar, as has been erroneously stated,) had been wounded; and that the sloughing of the structures at the bottom of the wound had extended to the commencement of the radial and ulnar arteries, thus permitting a regurgitating flow of blood. Notwithstanding the enormous quantity of blood lost at intervals, and the frequent necessity of disturbing the parts, which could not be done without creating great pain, and much exhaustion had been produced, I yet felt sanguine of the man's recovery. Diarrhœa, however, after a few days impossible to control, was superadded; and, although the stump was partially healed, and the ligatures remained firmly on the arteries, he gradually sunk, and died.

If the same accident were again to happen, and *under the same circumstances,* I am not aware that any preferable mode of practice could be adopted, if it is contemplated to save the limb. The failure of the case is entirely attributable to the repeated sloughing of the wound and arteries; a circumstance not unfrequent after ordinary amputation, and even after the lesser operations, where a peculiar state of the system has been produced by constitutional disturbance.

DISEASES OF CHILDREN.

On Gangrenous Erosion in Children. By EDWARD THOMPSON, Esq. Member of the Royal College of Surgeons, &c.

THERE is an affection, with which children more particularly are attacked, which in the majority of cases proceeds to a fatal termination, independent of the various and active treatment that has at different times been recommended and resorted to. It makes its seizure in different ways, the part being attacked with gangrene at once, or spreading by gangrenous ulceration,—being either preceded or not by a fever of a low type. By VOGEL it has been named Noma; and by different other writers designated by the terms Gangrenous Excoriation, or Erosion. Some have attempted to draw a line between the terms, and have wished to make distinct diseases of but one affection; but the grounds of difference are not strong, and it is more than probable that they are modifications only of one disease.

It makes its attack generally in weakly, ill fed and ill clothed children; and is a consequence of debilitating complaints, occasionally, in those of better condition. I have observed that it commences more frequently at the junction of the skin and mucous membrane of one part or other of the lip, and spreads on both sides, with equal rapidity, to parts in the neighbourhood. The action is inflammatory, ending almost immediately in mortification, and this with such quickness that sometimes the cheek becomes entirely destroyed in a few hours. The disease spreads by continuity; for, at the distance of a line or two, nothing particular can be observed in the part so soon to be destroyed. By whatever cause the disease is excited, when it has once begun, the state of the habit contributes to its increase, and, although arising from circumstances perfectly local, yet it must be looked upon as having to do with the constitution at large; a state of the system being present which adds strength to the disorder, being possessed of little or none of the power which a healthy body has of checking a process destructive, to life.

The causes of the complaint are not known, but there is reason to think that the disease is of local origin. I do not know that fever generally precedes it; but, after it has been established, fever is a common attendant, apparently excited by the state of irritation which, as the affection increases, becomes excessive.

In the treatment of this formidable disease, medical men have occasionally differed; but the farther they have gone into refined speculations respecting the constitutional nature of the complaint, and left unheeded the local disorder, the want of success has been more evident. No one that has seen the disease, and treated it, would depend on constitutional means, unaided by local remedies. In Mr. DEASE's cases, strict attention was paid to the state of local action, and his success is without parallel. But, with all kinds of treatment, the affection is one as dangerous in its character as any with which the practitioner has to cope, and oftentimes all his resources will avail him nothing, failure accompanying every effort.

The object of this short paper is to recommend a simple remedy, which has in my hands proved useful, and may therefore do so in others. It is one which has, in cases of sloughing ulcer, shown peculiar power, and was a few years ago recommended as a remedy in hospital gangrene. I mean the Balsam of Peru. Its efficacy in this affection induced me to employ it in gangrenous erosion of the lip and cheek; and, to prove that in this dangerous complaint it may be used with advantage, I beg leave to make a short abstract from my note-book of a case that occurred to me some time back, as threatening in its appearance as any I have seen.

On Thursday, the 1st of April, 1824, George Hadwin, a delicate boy, aged three years, complained of an uneasy feeling in the lip. When examined, a small hard spot was observed, slightly discoloured. The day after, this spot was found in a state of complete mortification, and beginning to separate. During the day it came away. After this the sloughing became more extensive and rapid, so as to destroy nearly the whole of the upper lip, and part of the cheek, in the short space of two days.

On Monday, the 5th of April, when I was desired to see him, the part had a most horrid appearance; several of the teeth hanging loose in the mouth, the gangrene having extended to the gums in the upper and lower jaws. The part was ragged, and of great extent. Round the ulcer was a narrow line of inflammation; but beyond this pencil of inflammation, which was not more than half a line in breadth, the integument had a natural appearance. The child was weak, with a haggard and pallid countenance. Sleep had completely left it; and to all appearance it was in a state of great danger. At such times, when so much is required, the mind turns to a variety of means, without determining which to fix upon, as all confidence in any of them having the power to arrest a malady known to be so fatal is lost, and one remedy seems nearly as important as another. In such a state of uncertainty, the following were directed, with little expectation of benefit.

Parti affectæ applic^{r} Bals. Peruvianum.—℞. Mist. Camphoræ ℥ iij.; Pulv. Cinchonæ ʒ iij.; Tinct. Opii gtt. xij. M. cujus capiat cochlear. demidium secundâ quâque horâ.

6th.—A little better; sloughing apparently stopped; redness round the edges abated, and the sore assuming a florid hue. No appetite; bowels relaxed.

To have port-wine and water as drink. Diet to be formed of animal jellies and vegetable mucilages.—Contin^{r} med.

7th.—Sore looking better; gangrenous inflammation diminished, and sloughing ceased. Slept a little in the night. Appetite improving.

8th.—Still improving. Sore healthy, except that the edges of the ulcer are slightly hard.

Sumat Ext. Hyosciami gr. jss. quartâ quâque horâ.

9th.—In every respect better. Several teeth in the upper jaw removed, being quite loose and unsupported by the gum.

Contin^{r} medicamenta et alia.

10th.—Part gradually improving.

Pergat.

11th.—Sore rapidly healing.

On the 12th, I ceased to visit him, the place being nearly healed, and his health established.

I had an opportunity of seeing this boy about twelve months ago, and was much surprised to find that nature had done so much in restoring what disease had so hastily removed. In the process of healing, the contraction of the skin had caused an erosion of the mucous membrane of the mouth, to such an extent that the deformity appeared as nothing when compared to what it was when I attended him. I have read in some continental publication, that RICHERAND, depending on such a renovating process, has removed the whole of the lip in cases of cancer, and with decided success; a regeneration taking place in a singular manner. From what has been done in this case by nature alone, (for a reunion by a surgical operation was out of the question,) I should have little doubt of such a process following most cases of loss of substance, either in the cheek or lip.

In the affection called cancrum oris, a disease of more common occurrence than the one above spoken of, but which possesses many of its characters, Dr. COATS has found a solution of sulphate of copper the most useful application. This is an old remedy, and was formerly more used than at present: with Dr. PARR it was a favourite one; but in erosion of the cheek, I can only say I have not found it to possess any power. It was employed in Hadwin's case, before I saw the child, but with no effect, the sloughing continuing without abatement.

On the peculiar way in which balsam of Peru acts in affections of this nature, little can be said. The pathology of the disease is hid in obscurity, and, till sounder principles are established, our means must partake not a little of an empirical character. The first state of the part attacked is that of inflammation; but whether the nervous energy is so far reduced that, almost immediately after such action has been formed, death of the part follows, from want of power to continue it, or the disease lies more particularly in the vessels, cannot be determined. But, at all events, a warm stimulant appears to check the progress of the mischief, and I know of none better suited for such purpose than Peruvian balsam.

The way it has been used has been by keeping the slough, and parts around, constantly soaked with warm balsam, smeared on lint; occasionally removing the sloughs, avoiding by every possible means the exposure of the surface to the action of the air. Attention to this is of paramount importance; for it is a fact, although difficult to explain, that the gangrenous inflammation proceeds more rapidly, if such precaution be neglected.

I may mention, before concluding, that it has been proposed to remove the diseased part with the knife, beyond the mark of inflammation; yet this operation, as having a tendency to excite inflammation, cannot be expected to be productive of benefit. Caustic has been employed in another complaint of a somewhat similar nature, and it is stated with some success. The actual cautery is another mean that has occasionally been tried; but all these have, in the greater number of cases, shown a tendency to extend the disease which they were employed to check: such being the case, their curative powers, in the complaint more immediately under consideration, is at best but doubtful.

Whitehaven; April 1827.

Observations on the Suppression of Cutaneous Eruptions in Children.

By EDWARD MORTON, M.B. L.M. Physician to the ROYAL METROPOLITAN INFIRMARY FOR SICK CHILDREN.

THE practice of applying astringents indiscriminately to the heads of infants, for the removal of the various eruptions to which they are subject, although very generally adopted, is by no means unattended with danger.

It is well known that applications of the above nature afford the most speedy means of repelling the eruptions in question. But this circumstance, in my humble opinion, forms an important objection to their incautious use; for I venture to affirm, from repeated experience, that discharges of any description about the heads of infants cannot be suddenly repressed, without the risk of inducing far more serious complaints.

I have had several cases of inflammation of the brain under my care during the last year, which occurred in infants upon porrigo of the scalp, which previously existed, spontaneously disappearing.

I have also seen many instances where the same disease has succeeded to cephalic inflammation, upon the appearance of which all symptoms of the latter affection have immediately ceased, and, so long as the eruption continued, did not return: but, upon its either disappearing spontaneously or being artificially removed, the primary complaint has been reproduced with increased violence. In cases of this description, the eruption is evidently beneficial, and is, in fact, a natural cure for the original disease. Does it not, indeed, exactly resemble the remedial means we ourselves adopt in such cases, when we produce a discharging surface by means of blisters and irritating dressings?

I have also met with other cases in which inflammation of the brain has supervened (where no previous symptoms of it had existed,) upon the intentional repulsion of eruptions on the head, by means of astringent ointments, or other similar applications. It is not long since a child, who had been attended by a surgeon for porrigo of the scalp, and which had just been removed by an ointment of the foregoing description, was transferred to my care for a fresh complaint;

the medical attendant himself observing at the time, that it was evidently labouring under "inflammation of the investing membranes of the brain," with which opinion I perfectly coincided. Upon minutely inquiring into the history of the case, I found that the child never showed any symptoms of the affection of the head until after the eruption had begun to be repressed by the local treatment employed. The following case occurred to myself very lately.

An infant, thirteen months old, was brought to me at the Dispensary, affected with porrigo of the face and head: its general appearance did not indicate any tendency to cephalic disease. I merely ordered some opening powders of Rhubarb and Calomel. After a few days, the child was again brought. I now prescribed an ointment composed of equal parts of Unguent. Hydrarg. Nitrat. and Ceratum Cetacei, to be applied in the usual manner; the powders being occasionally repeated. When the mother next came, she informed me that the child had been constantly drowsy, and had laid its head down ever since I last saw her; but that the eruption was "much better." I now found that the head was beginning to be affected in consequence of the recession of the eruption; and therefore advised the use of the ointment to be immediately suspended, the parts affected to be merely washed twice a-day with warm milk and water, and the aperient powders to be repeated. Upon the next visit, I was told that, as soon as the ointment was discontinued, the child immediately regained its usual liveliness, and has been going on well ever since.

But it is unnecessary to adduce further evidence on this head; every practitioner, who has had much experience in the treatment of infantile complaints, must have repeatedly observed many similar cases. I shall, therefore, proceed at once to the chief object of the present paper, which is to suggest the necessity of attending to the practical cautions to be deduced from the foregoing facts.

From these, and from the consideration of the nature of the circulation in the head, the following conclusions, I think, may be fairly and usefully drawn:—

1. That, in all cases of cutaneous eruptions upon the heads of infants, (particularly if extensive,) danger may arise from their artificial repulsion.

2. That, in cases where eruptions have occurred upon the scalp of infants subsequently to cephalic disease, dangerous or fatal consequences will most probably ensue, upon their intentional removal by local treatment.

3. That as astringent ointments, and other applications of a similar nature, are found by experience to have the power of speedily repelling the eruptions in question, they should

not be employed, without their effects being carefully watched, and their evil tendencies promptly guarded against.

The treatment of these diseases, therefore, in infants should in every case be commenced with purgatives, and repellent applications should not be made use of without due caution; such as may be selected being at first extremely mild, and afterwards gradually increased in strength. If the patient, during their employment, should become drowsy, and sleep much, or lay its head constantly down, (a sure indication of the commencement of affections of the head in infants,) they should be immediately discontinued, and purgatives be freely employed.

In cases where porrigo has attacked the scalp subsequently to cerebral inflammation, it will seldom be prudent to employ local applications at all, the cure being more safely accomplished by purgatives and alteratives.

15, *Eaton-street, Grosvenor-place;*
April 1827.

MISCELLANEOUS CASES.

Case of a singular Variety of Hernia, treated in ST. GEORGE'S HOSPITAL, *by* B. C. BRODIE, Esq. F.R.S.

ANNE MAGAN, a middle-aged woman, about eleven o'clock in the evening of Saturday, the 21st of April, was seized with pain in the abdomen and sickness. After straining violently in the act of vomiting, she discovered an unusual appearance, which led her to believe that she had suffered a miscarriage, and she sent for a female midwife. On the following day she was seen by Mr. MULLINS, of New-street, Dorset-square, who discovered a large portion of the small intestine hanging out of the orifice of the anus. The case being so remarkable, Mr. Mullins recommended that the poor woman should be taken to St. George's Hospital, where she was accordingly admitted about six o'clock in the evening of the 22d of April.

At this time not less than two yards of small intestine, with a corresponding portion of the mesentery, were seen protruding through the anus. The whole mass bore marks of a high degree of inflammation, and the intestine was much distended with air and liquid fæces. On examining the rectum with the finger, it was found that there was a transverse slit on the anterior part of it, about two inches above the anus, through which the protrusion of the small intestine had taken place. On attempting to reduce the protruded intestine, at first it readily re-entered the anus, but, when about one-half of it had disappeared, the reduction became difficult, and about one-fourth part of it could not be reduced at all. In fact, no method could be devised by which even a part of it could be made to pass through the slit in the rectum, so as to resume its natural position in the peritoneal cavity. The pressure of the hand caused the small intestine to ascend into the rectum, where it lay only as long as this pressure was continued; and nothing further in the way of reduction could be accomplished.

Under these circumstances, Mr. **Brodie** made a longitudinal incision of the linea alba, about two inches in length, below the umbilicus. The incision was continued through the peritoneum into the cavity of the abdomen; and the fingers being introduced at this opening, by gently pulling the small intestine, that portion of it which had protruded through the slit of the rectum was readily drawn back into the abdomen. It having been ascertained, by examining the rectum with the finger, that the reduction was completed, the edges of the wound in the linea alba were brought together by sutures.*

After the operation, the pulse was scarcely perceptible; the extremities were cold; and the patient was sick, throwing up again immediately whatever she swallowed. In about two hours the pulse was somewhat stronger, and the extremities were warmer; but the restoration of the vital powers was imperfect, and after some hours they again began to fail; and the poor woman died about six o'clock in the evening of Monday, the 23d of April.

On examining the body, the peritoneum generally was found much inflamed, and in many parts covered with a layer of coagulated lymph. That portion of the intestine and mesentery which had formed the protrusion was, however, less inflamed than it had appeared to be previously to the operation. There was a transverse opening in the anterior part of the rectum, without any marks of ulceration in the neighbourhood; whence it was concluded that the opening was the result of accidental laceration.

Case of Hydatids in the Tibia, in which four inches of the anterior part of the Bone were removed. By W. J. Wickham, jun. Esq. (Winchester Hospital.)

If you deem the subjoined case worthy of a place in your Journal, you will oblige me by giving it insertion. It appeared in the Lancet of a few weeks back, without my sanction or authority; but the case, as it is there communicated, being incomplete, I do not hesitate to give it publicity through your Journal.

This case I believe to be of very uncommon occurrence, and I know of no recorded history of the same disease; though I understand Sir A. **Cooper** has in his possession a humerus, the interior of which was occupied by hydatids: the bone was fractured, and in consequence the limb amputated.

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* During the operation, a part of the small intestine protruded through the wound of the linea alba, but it was readily replaced after the reduction of that which had protruded through the opening in the rectum was completed.

Elizabeth Stanbrook, ætatis thirty-five, of healthy constitution, was the subject of the case I have alluded to. On the 20th of September, 1825, whilst walking in the park at Stratton, and suddenly turning round, she felt her left leg give way, with a snapping noise, and, on falling down, discovered that her leg was broken. My father, who visited her soon after the accident, placed the limb in the usual position, and packed it in splints; ordering a saturnine application to be constantly used, in order to subdue the tumefaction which had come on opposite the fracture.

Upon inquiry into the history of the disease, under the conviction that some local or constitutional cause had given rise to the fracture, the following statement was reported:—About six years previous to the accident, she had been cut with a scythe, the point of which had penetrated the bone, but the wound soon healed. Soon after this, a tumor formed on the part, and continued gradually to increase till it had acquired the size of a hen's egg. It had been painful, and appeared to weaken the leg for some time previous to the accident.

As soon as the inflammatory swelling which was caused by the injury had subsided, I made an examination of the chronic tumor, which was soft and compressible, and its contents could be emptied into the body of the bone; but, on taking off the pressure, the swelling regained its usual size. The fractured ends of the bone were ragged, indicating considerable disease. The limb was packed as before in splints, and kept at rest for three months, at the end of which time no union was effected; when the poor woman consented to undergo an operation for the evacuation of the tumor, and the removal of the diseased bone, which, though proposed to her, she would not agree to before this time. She therefore came into the hospital.

On the 7th of January, 1826, the operation was performed as follows:—An incision was made, about six inches in length, on the face of the tibia, and into the tumor; upon which a number of small hydatids escaped. It was now found that the whole interior of the bone was filled with hydatids, which varied from the size of a small shot to that of a marble. These were all taken away, to the amount of a teacup full. The fracture of the bone was transverse, the edges of the fractured pieces very unequal; and a shell of bone only remained for about an inch above and below the fracture, and so thin that a very slight injury would have broken it. About four inches of the fore part of the tibia were removed, which included the rough edges. The limb was now laid in splints, and treated as a compound fracture. The wound granulated, and healed rapidly under the usual treatment.

At this time the woman has sufficient strength of the limb to sustain the weight of her body, and enable her to follow her usual occupations for some time in the day. The limb is as straight as after any case of fracture, and not shorter than the other. The constitution is improved, and the poor woman again pregnant.

The singularity of this disease has less induced me to offer it to public notice than its practical application. It well proves how much bone may be exposed and destroyed, and again generated.

In this case, about four inches of the anterior part of the tibia were taken away, the whole cavity exposed, and the bone fractured; yet a firm and useful limb has been restored.

I may here mention that a great number of cases of caries and necrosis have occurred to my colleagues and myself in the hospital, in which extensive portions of bone have been removed with the happiest effect, and limbs saved where I believe it is a very general practice to amputate.*

Winchester; April 7th, 1827.

CRITICAL ANALYSES.

Quæ laudanda forent, et quæ culpanda, vicissim
Illa, prius, cretâ; mox hæc, carbone, *notamus*.—PERSIUS.

The Life of EDWARD JENNER, M.D. LL.D. F.R.S. *Physician Extraordinary to the King, &c. &c. With Illustrations of his Doctrines, and Selections from his Correspondence.* By JOHN BARON, M.D. F.R.S —8vo. pp. xxiv. 624. Colburn, London, 1827.

NO eulogy of ours is necessary to exalt the name of JENNER. His philanthropic labours closed one of the "wide yawning gates of death," and his memory will live for ever in the gratitude of the world. If, in days of yore, the civic crown was bestowed upon him who rescued one fellow citizen from destruction, what marks of general adulation would have been deemed sufficient for the universal benefactor to mankind, by whose persevering exertions the desolating career of one of the most dreadful and fatal scourges of humanity was arrested? Honour would have been heaped upon honour, and reward upon reward, and yet the debt of gratitude would have been thought to be poorly paid. Dr. Jenner, it is true, had a sum of money voted for him by parliament; some honours and presents were conferred upon him by foreign countries; and there was no lack of compliment from every quarter of the globe. It is also true that he was looked upon as an honour to the age and country which gave him birth. But still it appears to us, when we reflect upon the mighty benefit he bestowed upon mankind at large, that his rewards were by no means commensurate with his deserts.

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* Our readers will find a case of Hydatids between the Tables of the Skull, by Mr. KEATE, in the tenth volume of the Med.-Chirurg. Transactions.

Notwithstanding the general attention bestowed upon the important subject of vaccination, and the patient investigations entered into by many able and zealous supporters of the cause, for the purpose of removing every doubt upon the subject, and for the establishment of such rules as might prevent the reputation of vaccination from suffering from any error in the practical application of it, there is yet much discrepancy of opinion upon many important points, which might probably be removed by a more undivided attention to the original doctrines of Dr. Jenner.

In the present work we have not only a sketch of his life,—the history of vaccination is traced from its infancy to its full maturity, and every important fact connected with its origin and subsequent progress is detailed. The work has been composed from materials of the most authentic description; the whole of the notes and correspondence of Dr. Jenner having been given to Dr. BARON by the executors, who were properly of opinion that the task of drawing an accurate delineation of the character and opinions of Jenner could not be confided to better hands. The eulogies of a biographer are sometimes received with doubt, but we know from many sources that Dr. Baron has not been hurried by feelings of private friendship into any commendations which the character of Dr. Jenner did not fully merit. "The world at large has felt and acknowledged the blessings of his great discover, but few are aware how numerous were his claims to admiration."

Dr. Jenner was nearly fifty years of age before he published his first work on the Variolæ Vaccinæ; and, as the whole of the early part of his life was spent in comparative seclusion, his biographer could not collect materials of much public interest from that period of his existence. His epistolary correspondence with JOHN HUNTER is worthy of attention; for, although Dr. Jenner's replies have been unfortunately destroyed, it tends to show that his opinions and researches were not thought lightly of by that eminent surgeon and physiologist.

After having traced Jenner's history in early life, Dr. Baron has brought together various incidents to illustrate the progress of his mind in effecting the grand discovery of vaccination. From the time of his first successful vaccination in 1796 to the last hour of his existence, he laboured incessantly to disseminate the practice. Although it would have been impossible, and even unjust, to have attempted a sketch of Dr. Jenner's life without dwelling at considerable length upon the important subject which principally occupied his attention, and which has for ever stampt his fame, Dr. Baron wishes it to be distinctly understood that he is not to be considered as the historian of the practice of vaccination.

It is lamentable to know that even Jenner had to contend with a spirit of envy and malevolence, which were calculated to deprive the world of the great advantages of vaccination. We cannot conceal the opinion we entertain upon this distressing part of the subject. It must be granted that much of the virulent opposition by which the beneficent exertions of Dr. Jenner were met in their infancy, arose, not from a laudable conviction that his views or doctrines were erroneous, but from an apprehension that, if he succeeded in bringing his plan to maturity, both his name and reputation would be raised above the common level. Dr. Baron could not pass over some mention of the personal injustice of which Dr. Jenner had to complain in some instances. He has touched upon this delicate subject with moderation, and dismisses it with the following eulogy to the memory of his friend:—"In every private affair, in every public transaction, one principle guided him. The purity of his motives, and the disinterestedness of his actions, have by no means yet been duly acknowledged. Had those who opposed him and vaccination known how little of selfishness, of vanity, or of pride entered into his character, they would, I am persuaded, deeply lament the wounds which they inflicted; and, in the place of bitterness and reproach, would have found cause for unmixed esteem and approbation."

Amongst other reasons adduced by Dr. Baron to show the propriety of publishing this first part of his work without waiting for the completion of the second, it is said that "the recent prevalence of small-pox in different parts of Europe, and the corresponding diminution of confidence in the virtues of the variolæ vaccinæ, rendered it an object of no inconsiderable importance to endeavour to restore and increase that confidence, by showing that Dr. Jenner clearly foresaw the deviations which have been observed; that his doctrines, if properly understood, satisfactorily account for them; and that nothing, in fact, has occurred which does not strengthen and confirm his original opinions, both with regard to the variola and the variolæ vaccinæ."

As might be expected from the remarks made in the preface, the sketch of Dr. Jenner's early life does not occupy much space. It cannot, however, but be interesting to the world to trace every circumstance connected with a man to whom all are so deeply indebted.

"Edward Jenner was born in the vicarage at Berkeley, in Gloucestershire, on the 17th of May, 1749. He was the third son of the Reverend Stephen Jenner, A.M. of the University of Oxford, rector of Rockhampton, and vicar of Berkeley. His mother was the daughter of the Reverend Henry Head, of an ancient and respectable family in Berkshire. This clergyman once held the living of Berkeley, and held at the same time a prebendal stall in the cathedral of Bristol.

Besides his church preferments, the father of Jenner possessed considerable landed property, the family being of great antiquity in Gloucestershire and the neighbouring county of Worcester. It has produced several eminent men; among whom may be mentioned Dr. Thomas Jenner, president of Magdalen College, Oxford, the immediate predecessor of the pious and learned Dr. George Horne. Jenner's father had been tutor to a former Earl of Berkeley; and the late Earl, his brother the Admiral, and indeed the whole of that noble house, always evinced a very strong regard to him and to his family. This excellent and devout man was cut off not long after the birth of his son Edward, at the age of fifty-two, in the year 1754. This heavy loss was, as much as possible, alleviated by the affectionate care and judicious guidance of his eldest brother, the Rev. Stephen Jenner, who brought him up with paternal tenderness. He had another brother, the Rev. Henry Jenner, M.A. Oxon, rector of Rockhampton, Gloucestershire, vicar of Little Bedwin, Wiltshire, and domestic chaplain to the Earl of Aylesbury. From this gentleman are sprung the Rev. George C. Jenner, and Mr. Henry Jenner, who, as will hereafter be seen, assisted their uncle in his interesting pursuits and inquiries.

"Dr. Jenner had three sisters,—Mary, Sarah, and Ann who was married to the Rev. William Davies, rector of Eastington, in the county of Gloucester. He left three sons,—the Rev. William Davies, D.D. rector of Rockhampton; Robert Stephens Davies, Esq. of Stonehouse; and Edward Davies, Esq. of Ebley House, in the same county.

"When about the age of eight years, Jenner was put to school at Wotton-under-Edge, under the Rev. Mr. Clissold. He was next placed under the tuition of the Rev. Dr. Washbourn, at Cirencester, where he made a respectable proficiency in the classics, and laid the foundation of some of those friendships which continued throughout life. His taste for natural history began to show itself at a very early period. Before he was nine years of age, he had made a collection of the nests of the dormouse; and, when at Cirencester, he spent the hours devoted by the other boys to play or recreation in searching for fossils, which abound in the oölitic formation in that neighbourhood. His scholastic education being finished, he was removed to Sodbury, near Bristol, in order to be instructed in the elements of surgery and pharmacy by Mr. Ludlow, an eminent surgeon there. On the expiration of his term with this gentleman, he went to London, to prosecute his professional studies under the direction and instruction of the celebrated John Hunter, in whose family he resided for two years, a favourite pupil." (P. 1—3.)

When Jenner went to London, he was in the twenty-first year of his age, Mr. Hunter in the forty-second. He was not at that time a public lecturer, but he had been about two years a surgeon to St. George's Hospital; and for a considerably longer period he had established his menagerie at Brompton, where he so successfully and perseveringly carried on his inquiries respecting the habits and structure of animals. Jenner was stimulated by the example of such a master to proceed with zeal in various investigations in natural history, to which he was led by all the predilections of his taste, and all the influence of his early habits. It is true that "it was a singular felicity which brought such men together." The pupil not only respected the teacher, but he loved the man.

After completing his professional studies in London, he retired from his preceptor's house; but he did not retire from his good will and affection, nor from his anxious guidance and direction in his scientific pursuits. An uninterrupted epistolary correspondence was kept up between them till within a short time of Mr. Hunter's death. Many of Mr. Hunter's letters are given, and will be perused with interest. They are characteristic of the indefatigable industry of the writer's mind, and at the same time illustrative of the nature and progress of the inquiries of Jenner. Upon these letters Dr. Jenner naturally set a great value.

During the time of his residence with Mr. Hunter in 1771, Captain Cook returned from his first voyage of discovery. The valuable specimens of natural history which had been collected by Sir Joseph Banks were in a great measure arranged and prepared by Jenner, who was recommended by Mr. Hunter for that purpose. He evinced so much dexterity and knowledge in executing this duty, that he was offered the appointment of naturalist in the next expedition, which sailed in 1772. It was his determination, however, to fix his abode in the place of his birth, to which he was partly guided by the deep and grateful affection he felt for his eldest brother, who had been his guide and director when deprived of parental care, and partly by an attachment to the rural scenes and habits of his early life. "Possibly," says Dr. Baron, "in this decision we may now be permitted to trace the agency of a higher power, which induced a young man frequently to reject most flattering prospects of wealth and distinction, that he might be enabled to follow up the leading object of his mind in the seclusion of a country village."

The existence of such an affection as cow-pox was known only in a few districts; it therefore could not become a subject of common observation, nor challenge the keen scrutiny of inquiring intellects to its elucidation.

"Its reported prophylactic powers, it is true, had not altogether escaped popular notice; but no one had arisen to ascertain the correctness of this rumour, or to investigate the source and accuracy of the tradition, till Jenner was led to the pursuit, and, to an almost unlooked-for and unparalleled extent, rendered it available to the subjugation of the greatest scourge of mankind. It is manifest, therefore, that, in the very essence of the inquiry itself, and in the character of the genius of him by whom it was conducted, there was a suitableness and an accommodation, without which it neither could have been begun nor accomplished. This peculiarity will be rendered still more apparent when we come to trace the progress of his mind in maturing the discovery. He mentioned the subject to Mr. Hunter while he was his pupil; and often attempted to arouse the attention of his professional brethren in the country to it, but without success. The merit of persevering in his labours, and the honour of his triumph, rest therefore in an exclusive manner with himself.

"In attempting to unfold character, it is not less instructive than it is interesting to find in the private history of a distinguished individual, the successive links in the chain of events by which it pleaseth Providence to conduct him to that eminence where shines the splendour of his genius and his intellect. This progress in the case of Jenner can luckily be delineated with much accuracy. While yet a youth, and just entering on his elementary studies, that impression was made upon his mind which laid the foundation of all his future researches respecting vaccination; and, with the constancy of a character fitted and fashioned for great achievements, it was never permitted to escape from his consideration till it terminated in that wonderful discovery, the effects of which all nations have enjoyed. It is probable, therefore, that the seed which was sown before his intercourse with Mr. Hunter commenced, would in some future time have germinated, even though he had never witnessed the animating and encouraging example afforded by his prolific and indefatigable genius." (P. 8, 9.)

After his return from London, Jenner commenced the active duties of his profession as a country surgeon. Every leisure moment, however, was dedicated to instructive pursuits. His practice rapidly increased, and he acquired considerable reputation. The study of natural history he still continued ardently to pursue. At this early period of his life he had given indications of genius, which all good judges of character did not fail to recognise as the harbingers of much future reputation. "His knowledge and dexterity as a surgeon, his manners as a gentleman, and his general information as a man of science, rendered his company always acceptable in the families most distinguished by rank or talent in the district where he lived. But there were other qualities, of a personal nature, which more peculiarly endeared him to his intimate associates. He not only commanded confidence by his skill, and respect and esteem by his acquirements, but also secured to himself good-will and affection by the tenderness, and kindness, and benevolence of his nature, and the meekness with which he carried all his faculties in the sight of his fellow men. To much depth and accuracy of observation, and uncommon delicacy of feeling, which at times cast a shade of pensiveness and sorrow over his mind, there was added a liveliness of disposition, which rendered him a friend capable alike of entering into the deepest and saddest emotions of the soul, or participating in all the joys of its gayest and happiest moments." (P. 12.)

As a proof of the amiability and urbanity of Dr. Jenner's manners, and of the powers of his conversation, his friends used frequently to accompany him for miles in his professional rides round the country, and this too even at midnight, that the pleasure derived from his company might be prolonged. He had the happy talent of uniting scientific and original observation with the playfulness, and mirth, and wit of familiar intercourse. His recreations from his more severe studies consisted in the cultivation of polite literature, and occasionally he sought an acquaintance with the Muses. Some specimens of his poetic effusions are given, which, as recreations, are highly creditable to his taste.

We must pass over the letters of Mr. Hunter, which consist principally of questions submitted to Dr. Jenner upon various subjects of natural history and physiology.

Dr. Jenner's interesting and well-known paper on the Cuckoo was read, in March 1788, to the Royal Society, and printed in the Transactions of that year. The most important facts of this communication are detailed by Dr. Baron.

"On the 6th of March, 1788, an event of great moment to him took place. He was on that day united in marriage to Miss Catharine Kingscote, a lady on whom his affections had been long fixed, and in whose counsel and sympathy he found his surest solace in many of the most trying scenes of his future life. She was elegant in her manners, accomplished in her mind, and possessed an understanding of great vigour. She had been an invalid for a considerable time before her marriage, and she never at any time, after her early years, enjoyed robust health. The family of the Kingscotes is one of the most ancient and respectable in this county; and it has received additional distinction from their personal merits, as well as from their alliances with eminent individuals. Anthony Kingscote, Esq. was a kinsman of the great Sir Matthew Hale, and became his guardian after the death of his parents; and the affinity contracted by the union with Jenner will not reflect less lustre on their name." (P. 86.)

His eldest son, Edward, was born on the 24th of January, 1789.

In one of the letters of Dr. Jenner, we find in a few words the burden of the various doctrines so frequently insisted on by writers on Dyspepsia. "You know it has long been my creed that *stomach* is the governor of the whole machine, the mind as well as the body. The seat of action is certainly the brain; but the stomach gives the word of command, and tells it how it shall act."

To Dr. Jenner we are indebted for a knowledge of the laws which regulate the migration of birds.

It is well known that Mr. Hunter died of angina pectoris, and, as a proof of Dr. Jenner's pathological skill, it should be stated that he was the first to suspect, at a very early period of Mr. Hunter's illness, the nature of the malady under which he laboured.

In 1792, Dr. Jenner obtained a degree of doctor of physic from St. Andrews, to relieve himself from the labours of general practice.

In the fourth chapter, Dr. Baron gives the early history of vaccination. Dr. Jenner's attention was drawn forcibly to the nature of cow-pox whilst he was yet a youth. This event was thus brought about:

"He was pursuing his professional education in the house of his master at Sodbury; a young country woman came to seek advice; the subject of small-pox was mentioned in her presence; she immediately observed, "I cannot take that disease, for I have had cow-pox." This incident* rivetted the attention of Jenner. It was the first time that the popular notion, which was not at all uncommon in the district, had been brought home to him with force and influence. Most happily the impression which was then made was never effaced. Young as he was, and insufficiently acquainted with any of the laws of physiology or pathology, he dwelt with deep interest on the communication which had been casually made known to him by a peasant, and partly foresaw the vast consequences which were involved in so remarkable a phenomenon. He was the more stimulated to meditations of this sort by frequent opportunities of witnessing the ravages of small-pox; and by retaining the most vivid and painful recollections of the severe discipline which he himself had not long before passed through, preparatory to his inoculation for that disease. 'There was,' (to use his own words,) 'bleeding till the blood was thin; purging till the body was wasted to a skeleton; and starving on vegetable diet to keep it so.' The possibility of averting such evils could not arise in a mind like Jenner's without possessing it fully, and he resolved to let no opportunity escape of acquiring knowledge on so important a subject. How judiciously, how perseveringly, how successfully, he fulfilled this early resolution, will be seen as we follow him through his various examinations and experiments." (P. 121—3.)

Among other subjects of interest which Jenner carried with him from the country in 1770, when he commenced his studies under Mr. Hunter, was that of cow-pox, which he frequently mentioned. Mr. Hunter never damped the ardour of a pupil by suggesting doubts or difficulties: his answer was, "Don't *think*, but *try*; be patient, be accurate." At first Dr. Jenner tried in vain to rouse his professional friends in the country to push their inquiries upon this interesting subject. It was not till 1780 that he was enabled, after much study and inquiry, to unravel many of the perplexing obscurities and contradictions with which the question was enveloped. In the month of May in that year, he first disclosed his hopes and his fears respecting the great object of his pursuit to his friend Edward Gardner.

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* "An incident analogous to that above recorded is mentioned in one of Dr. Jenner's note-books of 1799, in the following words:—

"I know of no direct allusion to the disease in any ancient author, yet the following seems not very distantly to bear upon it. When the Duchess of Cleveland was taunted by her companions, Moll Davis (Lady Mary Davis) and others, that she might soon have to deplore the loss of that beauty which was then her boast, the small-pox at that time raging in London, she made a reply to this effect—that she had no fear about the matter, for she had had a disorder which would prevent her from ever catching the small-pox. This was lately communicated by a gentleman in this country, but unfortunately he could not recollect from what author he gained this intelligence."

"He was riding with Gardner on the road between Gloucester and Bristol, near Newport, when the conversation passed of which I have made mention. He went over the natural history of cow-pox; stated his opinion as to the origin of this affection from the heel of the horse; specified the different sorts of disease which attacked the milkers, when they handled infected cows; dwelt upon that variety which afforded protection against small-pox; and with deep and anxious emotion mentioned his hope of being able to propagate that variety from one human being to another, till he had disseminated the practice all over the globe, to the total extinction of small-pox. The conversation was concluded by Jenner in words to the following effect:—'Gardner, I have entrusted a most important matter to you, which I firmly believe will prove of essential benefit to the human race. I know you, and should not wish what I have stated to be brought into conversation; for, should any thing untoward turn up in my experiments, I should be made, particularly by my medical brethren, the subject of ridicule; for I am the mark they all shoot at.'" (P. 128.)

We must refer to the work itself for the details of the many difficulties Dr. Jenner first experienced, and for an account of the gradual advancement of the grand cause of vaccination. As may be easily imagined, Dr. Jenner's feelings were wrought up to the highest pitch of benevolent gratification when he had fair promise of success.

Dr. Jenner always considered small-pox and cow-pox as modifications of the same distemper, and that, in employing vaccine lymph, we only made use of means to impregnate the constitution with the disease in its mildest, instead of propagating it in its virulent and contagious form, as is done when small-pox is inoculated. Dr. Baron has made some interesting researches upon this question, and we agree with him that they sustain these propositions:

"First, that an eruptive disease, *common* both to man and the inferior animals, has been known in different ages, and in different countries; and that the descriptions given of this eruptive disease by various writers accord so completely with those acknowledged to be characteristic of small-pox, as to render it highly probable that this disease actually existed at a much earlier period than that usually assigned to its origin.

"Secondly, that as there are numberless writers who have described the small-pox in man, so there are others of established name and reputation who have treated of a similar eruptive and pestilential disease, as existing in various countries and in different times among the inferior animals, but especially among cattle; that to this disease they have unhesitatingly applied the name of Variola, and actually recommended such treatment as experience had proved to be useful when that disease attacks man." (P. 163.)

In reference to the returns made by Dr. GREGORY, as physician to the Small-Pox Hospital, which our readers will remember excited much attention, Dr. Baron observes—

> "Vaccination seems ever to have been fated to suffer more in character from events within the walls of the Small-Pox Hospital, then from any other quarter: its atmosphere has always been unfriendly to the benign influence of vaccina; but I trust that the inquiry which has taken place will counteract the ill effects that might have arisen, had the statement of the physician remained unexplained. I hope it will not be thought out of place if I express an ardent wish that my professional brethren may be slow to publish fatal or other cases of small-pox after vaccination, until they have good grounds for believing that their patients had regularly and duly passed through the protecting process; and surely there is no reason to think that this had taken place in any of the fatal instances reported by Dr. Gregory, as a reference to his examination will fully evince." (P. 274.)

We do not think the censure upon Dr. Gregory merited; for, whatever may have been the case with some other physicians to the Small-Pox Hospital, the whole tenor of *his* writings has been in favour of vaccination, and we know that practically it has in him a most zealous promoter. The cases alluded to were instances of small-pox after imperfect vaccination.

The disgraceful attempts which were made by certain individuals to rob Dr. Jenner of the merit of the discovery of vaccination, have been frequently and properly commented upon. Dr. Baron treats this part of the subject with much temper and good sense. As the biographer of Dr. Jenner, it was his duty, however, to state without reserve every fact connected with the history of vaccination. And there can be no doubt that there were many persons whose whole endeavours were exerted to sink the name of Jenner as much as possible, and to attach to themselves the reputation for a discovery to which they had not the shadow of a claim.

It may be of importance to remember that Dr. Jenner invariably maintained that any cutaneous disease, however trifling or slight in appearance, was capable of interfering with the regular course of cow-pox, and of preventing it from exercising its full protecting influence. We have had many opportunities of verifying this observation in our own practice.

At a subsequent period, Dr. Jenner was particularly anxious to send out supplies of virus to our distant possessions in the East. Government were not very cordial in their assistance, and to the honour of Dr. Jenner let it be mentioned, that he desired his own name to be put down for a subscription of one thousand guineas. Vaccine matter, however, was forwarded from Vienna to Constantinople, and from thence to Bombay; and his philanthropic design was thus rendered unnecessary.

As some proof of the principles upon which vaccination met with support and countenance in some places, Dr. Baron relates the following anecdote:—"I believe it was at this time that the incident I am about to mention occurred. Notwithstanding his repeated notices of gratuitous aid, one parish had hitherto obstinately held back. This year, however, he found the people bringing their children in great numbers. Of course he wished to know by what means they had become converts to the new inoculation. He found that arguments of a very authoritative nature had brought about the change. The small-pox, in the course of the preceding year, had been introduced into the parish, and proved extremely fatal; but it was not this circumstance, nor yet the security of those who had been vaccinated in the adjoining parishes, that brought cow-pox inoculation into favour. The cost of coffins for those who were cut off by small-pox proved burdensome to the parish; the churchwardens, therefore, moved by this argument, effectually exerted their authority, and compelled the people to avail themselves of Dr. Jenner's kind offer!" (P. 433.)

The almost undivided attention which Dr. Jenner paid to his favourite subject necessarily diminished his practice as a physician, and it was thought that the magnitude of his discovery, and the very disinterested manner in which he had sacrificed his time and property for the general good, were fit subjects for the consideration of parliament. Preparatory to a direct application to the great national council, some of the chief personages in Gloucestershire began to take measures to give some testimony of the value in which Dr. Jenner was held by those who knew him best, and amongst whom his life had been spent. The late Earl of Berkeley took the lead in this becoming expression of public feeling; the Countess of Berkeley also applied herself, with her usual earnestness, to effect the object.

In the parliamentary investigation which took place for the purpose of considering the claim of Dr. Jenner to national reward, we again find attempts were made to diminish his reputation, and to defeat the object of his friends.

"The documents presented by Dr. Pearson were evidently intended to prove that vaccine inoculation had been practised by others before Dr. Jenner. His second examination before the committee had a different object. It went to show that, though Dr. Jenner promulgated the practice of vaccination, he really knew very little about the matter; that his opinions as to its origin were erroneous; and that it required the experiments and labours of other observers to correct his mistakes; and that he and Dr. Woodville had the chief merit in the establishment of the vaccine inoculation. Thus, after making due allowance for the claims of Farmer Jesty, and the valuable and scientific investigations of others, nothing was left to Jenner save that of being the publisher of a provincial rumour, the nature of which he himself did not fully understand! What must have been the feelings of those who could utter statements capable of leading to such inferences?" (P. 501.)

After much discussion, the sum of 10,000*l.* was voted to Dr. Jenner. "Thus we have seen," says Dr. Baron, "in what manner the assembled representatives of our country, supported by the declaration of the King's minister in his place in parliament, rewarded the discovery of Jenner."

In the course of the parliamentary investigations, many of the most distinguished members of the profession very highly eulogised the liberal conduct of Dr. Jenner.

We believe there was but one opinion respecting the amount of the grant made. It was almost universally deemed inadequate to his powerful claims to public gratitude. In the early part of the preceding century, the House of Commons had voted a much larger sum for importing a silk-throwsting machine from Italy.

We pass over with due contempt the ridiculous and insignificant efforts of M. HUSSON to show that his countryman, M. RABAUT, had a prior claim to the discovery of vaccination.

The fourteenth chapter gives a history of the formation of the Royal Jennerian Society. Here again intrigue was busily employed to place others in the distinguished post of head of the society, to which honour Jenner alone could have a claim. These unworthy efforts, however, were completely defeated.

The fame of Dr. Jenner must always maintain the highest rank, not only on account of the splendid discovery he made, but from the very liberal and disinterested manner in which he at once stated his views to the profession and public. This fact is alone an answer to the various insinuations that have been sometimes hazarded to lead to the inference that personal interest was his chief object. It was properly and fairly urged, during the parliamentary investigation, by Sir Walter Farquhar, Mr. Cline, and other leading members of the profession, that Dr. Jenner might have made at least

10,000*l.* a-year, had he kept within his own breast the preservative powers of vaccination.

In confirmation of the eulogies Dr. Baron has so warmly bestowed upon the pure philanthropy of Jenner's mind, we may state that we have been assured by a distinguished member of the Berkeley family, with whose countenance, patronage, and friendship Dr. Jenner was honoured for many years, that nothing could exceed his anxiety when his experience of vaccination had not led to any positive and satisfactory conclusions, lest the promulgation of the practice should prove injurious, by inducing parents to forego the advantages of small-pox inoculation, and thus expose their children to the natural disease. He was frequently in the habit of exclaiming, that "he should either prove a blessing or a curse to his country!"—a blessing, if he succeeded in the hopes he so fondly cherished; but a curse, if, from mistaken zeal, he should be the means of proposing vaccination as a preservative, and subsequent experience should prove that it afforded no protection against the ravages of small-pox.

The manner in which Dr. Baron has performed the duty he has undertaken, is highly creditable to his ability and judgment. But, notwithstanding the reasons assigned at the beginning of the volume, we are of opinion it would have been more judicious to have published the whole of the work at once, even if some delay had been unavoidable. Its success would certainly have been greater, and the interest in the perusal of it uninterrupted by a break which the title-page does not lead the purchaser to expect.

A Critical Analysis of the Memoir read by Dr. BARRY *before the Academy of Sciences, on the 8th of June,* 1825, *at the Institute of France, on Atmospheric Pressure being the principal Cause of the Progression of the Blood in the Veins.* By HENRY SEARLE, Surgeon.—8vo. pp. 88. Callow and Wilson, London, 1827.

Dr. BARRY's researches on the influence of atmospheric pressure on the circulation have lately excited considerable attention, and, as might be expected from the nature of the subject, great contrariety of opinion. Having in a former Number given a sketch of the opinions of Dr. Barry, it is incumbent upon us to notice the critical examination of them by Mr. SEARLE.

In all philosophical inquiries, the utmost coolness of discussion and temperance of expression should undoubtedly be preserved, and, without accusing Mr. Searle of a direct violation of either the one or the other, we certainly discover in his preface a little of that critical tartness which, if replied to in the same tone, might very probably ruffle the even spirit with which inquiries of this sort ought to be conducted. Mr. Searle informs us that "not one of Dr. Barry's experiments, by which he has made so many proselytes to his theory, will bear the least examination: they are merely proofs that there has been unnecessary pain inflicted." Now, as there are doubtless "many proselytes" to the theory of Dr. Barry, who have attentively investigated his experiments, and the results deducible from them, it is going too far to say "that they will not bear the least examination." They may be, and we think are, fallacious; but yet they are sufficiently plausible to have caught the approbation of some of the most distinguished physiologists in France, and to have excited very general attention in this country.

Dr. Barry has made considerable inquiry whether his theory has ever occurred to the minds of any other persons? and Mr. Searle replies, "I can in veracity assert that it did present itself to me about four years ago, and most probably it has to others: but he was not likely to find in print any thing so palpably discordant with some of the plainest phenomena in the animated part of the creation."

Mr. Searle observes also, that Dr. Barry has openly said, in the presence of a number of persons, and within his hearing, at the Hunterian Society, that it is not fair to judge of his theory by his book; and that, if we would suspend our objections until the appearance of his second Memoir in the spring, that we should be perfectly satisfied of its truth. Now, if this be the fact, (and we have no reason to doubt it,) it would obviously have been better that Mr. Searle should have delayed his critical examination until the theory was presented to us in a more perfect form. We are obliged to Mr. Searle for the mention of this fact, as we certainly should not feel ourselves justified in formally analysing or criticising the presumed refutation of opinions, which the author himself confesses to require still further development before we can judge of their validity. We have merely to state, then, for the information of those who may be interested in the subject, that the experiments of Dr. Barry are examined by Mr. Searle with much attention, and that the results which have been drawn from them are deemed erroneous.

In reference to the fourth experiment of Dr. Barry, which is quoted at length, Mr. Searle makes the following observation: "The laboured anatomical inquiry apparent throughout this quotation commands a degree of respect: at the same time it must be regretted that so much pains should have been taken in the support of error, rather than in the development of truth; for it is palpably evident that Dr. Barry has not read impartially the anatomical language of nature, but has had a particular object to accomplish, and has made a stretch of contrivance in taking this peculiar view of the mechanism of the pectoral viscera, in violation of the real laws under which it is governed."

We confess that the following experiment made by Mr. Searle offer objections to the doctrines of Dr. Barry, which we have not ingenuity enough to remove.

> " But, in order to obtain an unequivocal proof that the circulation of the blood is perfectly independent of the aid of a vacuum forming around the heart, an experiment was made, which probably could not have been more simple and apparent, nor less irritative. I removed sufficient of the parietes of the thorax over the region of the heart of a fully grown rabbit, to enable me to introduce a finger, and raise the heart upon its base, and give any direction to its long axis. Here was an influx of atmospheric pressure directly around this organ, where the vacuum ought to occur; the impossibility of its occurrence need not be urged. This animal bled profusely from the wounded extremities of two or three intercostal arteries, which exhausted it for a time; it afterwards ate, ran about, and lived seven hours; when it was killed, to prevent any suffering taking place from the inflammation which would have supervened." (P. 37.)

We have been informed also, by one of the most distinguished experimental physiologists of the day, that, if the ribs and sternum are entirely removed, the circulation still continues for a time, in an equable and natural manner. We know also that Dr. Barry denies this fact; and, as we have not ourselves made the experiment, it is impossible for us to determine which party has been led into error by experiments imperfectly conducted, or deductions hastily and incorrectly drawn.

At the conclusion of his analysis, Mr. Searle observes that

> " It cannot be disputed that Dr. Barry has invited the attention of the faculty to a mode of treating poisoned wounds, which had perhaps entirely fallen into oblivion. Although this be not a discovery, it is tantamount to one. Its practical utility cannot at present be estimated, nor will it be duly appreciated until his theory on the circulation of the venous blood has become silenced; for it has been so strenuously forced upon the minds of the faculty that its assumed importance eclipses, in a measure, the great good which Dr. Barry is likely to occasion by his experiments on poisoned wounds. It must be admitted that Mr. Ellerby has made this practice more extensively useful, by having ascertained

that pressure in any form, applied near the part, so as to intercept the wound and the heart, will answer the same end as the cupping glass; for there is no inhabited part of the globe where a glass, a cup, or some kind of vessel, might not be promptly found, for the purpose of preventing any absorption of the deleterious matter, until the excision or destruction of the part could be made.

"In conclusion I must be allowed to say, that the replies I have made to some of Dr. Barry's remarks in his preface, and the views taken of his experiments, are such as, in my humble opinion, are directly called for, and should not be passed by, for obvious reasons: at the same time, I beg to express a very high sense of Dr. Barry's merits, in having so ably and decidedly placed before the public the practice which ought to be adopted in all cases of poison; and, if to save lives is an important improvement in medicine, Dr. Barry has a right to claim an universal observance of this well-known motto—*Palmam qui meruit, ferat.*" (P. 87.)

Since the above was written, we have met with the following passage in a very interesting work on Physics, lately published by Dr. ARNOTT, and which we think too much to the point to require any apology for its insertion.

"Some recent authors, as stated above, either not being aware of the facts which prove that the blood is every where pressed into the veins from the capillaries, with force much more than sufficient to raise it to the heart again; or being unable, from their little familiarity with physics, to draw exact conclusions from the facts, or to avoid errors in their own hypotheses, have promulgated the opinion that the progression of the blood in the veins is greatly owing to a suction power in the heart or chest: that is to say, to the atmospheric pressure remaining constant on the body generally, while it is occasionally lessened about the heart; a circumstance, of which the whole effect, as stated above, is merely a slight disturbance of the uniformity of the venous current near the chest. Now such a doctrine could not be proposed or entertained for a moment by a person understanding the principle of a common household pump; and that it has been published and tolerated by able men in the present time, will remain a proof to posterity of the deficiency, as regards fundamental science or natural philosophy, which now exists in the ordinary medical education. Much ingenuity has been wasted upon it, particularly by Drs. Carson and Barry; the latter of whom, after laborious investigations, by experiment on living animals, has even attempted to build upon it a superstructure of medical theory and practice. The fault, however, may be less in the parties who have been pursuing what appeared to them an important object, than in the system of education which left them exposed to such errors. Dr. Barry need not blush to have proposed an explanation, in which members of the French Institute, sitting to judge it, were not prepared clearly to point out the fallacy. To say that the influence of the heart or chest is the power which draws the blood to the heart from the general system, is just as if one asserted that the ocean tide at the mouth of a river is the power which collects the tributary streams in the interior country.

" We shall enter into a little detail on this subject, because the discussion will elucidate some minor points connected with the circulation.

" Presuming, then, that the reader perfectly understands the theory of pumps, and therefore of atmospheric pressure, as explained under Pneumatics, he will readily understand the two following propositions, either of which proves it to be a physical impossibility that a sucking action of the heart or chest can be a cause of the blood's motion along the veins. 1st. The veins are pliant tubes free to collapse, and no pump can lift liquid through such. 2d. The *suction power* of the chest in ordinary respiration is too weak to lift liquid a distance of even one inch through tubes of any kind.

" A practical illustration of the first proposition is afforded by putting the point of a syringe, capable of making a complete vacuum, if desired, into a piece of gut, or eel-skin, or vein, filled with water, and then trying to pump up the water. The result will be, that the fluid close to the mouth of the syringe will enter it, and the sides of the pliant tube will then collapse as a valve against the syringe, making an end of the experiment. In exact proportion to the rigidity of the tube would be the distance to which the influence of the syringe would extend in it: if it required, for instance, half an ounce of pressure on the square inch of its surface to make it collapse, then the pump would draw up one inch of water, and so for other proportions. If, during the action of the syringe, the tube were allowed to open at the bottom into a vessel of water, instead of the syringe then drawing any more water from the vessel into the tube, the original contents of the tube would straightway be discharged downwards into the vessel; and the result would be the same even if there were a thousand tributary streams pouring into the tube, unless they entered with force enough to rise up to the syringe.

" The explanation of all these facts is found in the pressure of the atmosphere, seeking entrance every where at the surface of the earth, with a force of fifteen pounds per square inch, and overcoming any opposing force less than this: sufficient, therefore, to push a column of water thirty-four feet high through a rigid tube into the vacuum of a pump, but causing the sides of the tube to collapse, unless able to sustain at any given part a compressing force equal to the weight of water in the tube below.

" Some bad reasoners on this subject have believed that if a suction power exist equal to one inch column of liquid, any column, however long, must follow the first inch when acted on by the power in question; for, say they, the atmospheric pressure preventing a vacuum will prevent separation of the liquid. Now this reasoning is altogether inapplicable to pliant tubes, because the ready collapse of their sides will both allow the separation and prevent the vacuum; and, with respect to rigid tubes, it is equivalent to asserting that a force just capable of lifting one link of a chain, must therefore be able to lift any number of connected links. Water in a rigid tube, to which air has no admittance, may be considered as a chain, for it is held together by a force of fifteen pounds per inch pressing inwards at the two ends: and any force less than this cannot therefore lift one portion of it away from another, and therefore cannot draw out a drop but by lifting the whole. A man cannot suck water from a full rigid tube which is closed at the bottom; and if the bottom be open, and he has not power to support the whole contained fluid, it will sink from its tantalised lips, to stand at an elevation marking his suction power.

"To illustrate the second proposition respecting the trifling suction power really residing in the chest, we shall state that a person of ordinary strength, using the power of the chest only, and not of the mouth separately, (which is a smaller and much more powerful pump than the chest,) cannot through a rigid tube suck water from more than about two feet below: and the opposite action of blowing outwards has nearly the same limit as is found by dipping the end of a tube two feet into water, and then trying to blow through it. Now, as water rises more than thirty feet towards a perfect vacuum, such as that of a good pump, the facts mentioned prove that the diminished pressure in the chest, as an approach to a vacuum, is never more than *one-fifteenth* of the whole, and the increased pressure during straining is in a corresponding degree. But in ordinary breathing, instead of differences corresponding to a liquid column of two feet or a *fifteenth*, the increase and diminution of air-density in the chest is measured by a column of less than one inch, or about a *five-hundredth*. This is easily shown on breathing through the nose, and holding one end of a glass tube in the mouth while the other end is immersed in water, by noting how much the water in the tube rises above the surrounding level during *inspiration*, and sinks below it during *expiration*. The mouth during this experiment may be considered as part of the general cavity of the chest, to and from which air is passing by the narrow openings of the nostrils. In tranquil breathing, with both nostrils open, the fluctuation in the tube is less than half an inch each way; with one nostril closed, and the other a little compressed, it may amount to a whole inch; and with hurried or convulsive breathing, like that of an animal in terror or in pain, it may exceed twelve inches. Although the measures so obtained from the mouth are somewhat too small for the changes in the chest itself, because the chest is more remote from the opening by which the external air enters, the difference is very trifling, as is proved during such experiments by stopping the nostrils altogether, and continuing the same respiratory efforts; and also by the agreement of the results with strict calculation founded on the inertia and velocity of the air respired: a calculation similar to that required in adjusting the index to the machine for measuring water-currents. In common healthy breathing with the mouth open, the fluctuation of pressure in the chest is measured by less than half an inch motion each way of the liquid column. Dr. Barry, not aware that this point could be so easily determined by the bloodless experiment described by the author above, or even by a simple calculation, has sought the solution by numerous trials on living animals, into some part of whose chest he forced a tube: but, even if farther experiments had been at all necessary, these of Dr. B. could not have decided the question. 1st. Because the breathing became violent or unnatural, from the pain and agitation of the animals; and, 2d, because the experimental tube often or always became a syphon: and Dr. B. not adverting to this fact, has not recorded the difference of level in the liquid at the two ends. That the external level was for the most part higher than the internal, is proved by his having noticed almost solely the *inhaling* action of the chest, although the *exhaling* is generally an equal, and often a more powerful effort.

"Calling an inch column of blood, then, the measure of the greatest sugescent and repellent powers of the chest during ordinary respiration, we see that the force which really sends the blood from below to the heart may have to lift a column one inch shorter during inspiration, and one inch longer during expiration. And this is the full and true measure and nature of the influence of the respiration on the blood's return to the heart by the veins. To say that the atmospheric pressure, modified by respiration, is the great power which moves the venous blood, is as if we said that a boy, standing near the ponderous fly-wheel of a steam-engine, and giving it his Lilliputian thrust alternately backward and forward, were the prime moving force of the machinery.

"The truth explained above, that no kind of pump can lift fluid through pliant tubes, free to collapse, like the veins, renders it unnecessary to speak farther here of the pumping action of the heart, insisted on by Dr. Carson, or of that other action to which also he attributes great influence,—viz. the tendency towards a vacuum external to the lungs and around the heart, produced by the disposition of the lungs to collapse. It may be remarked, however, that this last influence is more considerable than the simple inspiratory action dwelt on by Dr. Barry, and operates during expiration nearly as much as during inspiration, varying in force with the degrees of expansion of the chest. It is weaker in the living than in the dead body, because the rigidity of the distended pulmonary arteries helps to support the weight of the lungs.

"Were it necessary to give proofs to persons unable to follow the above argument, that a suction power in the heart or chest is not the force which draws the blood from the extreme veins, the reference is ready to many notorious facts quite incompatible with that supposition; for instance—A vein tied, fills tensely below the ligature; a vein cut across bleeds from its distant orifice, and will fill a lofty tube connected with it; the circulation is perfect in the fœtus in utero, which breathes not; and it goes on in persons holding their breath, and in divers, &c. &c.

" After the explanations now given, it is almost superfluous to remark that *absorption* in animals cannot depend on atmospheric pressure, and that the effect of cupping glasses employed to extract blood, or to prevent the absorption of poison in wounds, in no way depends upon the fluctuating density of the air in the chest. Dr. Barry's reasonings upon these subjects involve the same fallacy as his reasonings on the venous current."

Observations on the Treatment of Gonorrhœa by a new Preparation from the Balsam of Copaiba; with illustrative Cases. By JAMES THORN, Member of the Royal College of Surgeons.—Highley, London, 1827.

MR. THORN has devoted considerable attention to the effects of Copaiba in Gonorrhœa, by which he has been led to the discovery of a new preparation of that substance, which he strongly recommends. Never having tried the " extract," we cannot give any opinion from our own experience, and shall therefore content ourselves with making our readers acquainted with the author's statements. Experiment alone can decide the question.

Having spoken of the inconveniences attending the Balsam of Copaiba, as usually given, the author continues:

" From these circumstances, I was induced to try what would be the result of an analysis of the balsam, conceiving that its active principle might be very much concentrated, and rendered more extensively useful when separated, than in the present form. By distillation, an essential oil was produced, of a light green colour, having a most unpleasant smell and taste; its specific gravity being 0876 to 1000 water, leaving a brown resinous extract, quite soft, but becoming hard and brittle when cold; nearly tasteless and inodorous, soluble in æther and pure alcohol. The proportions obtained from two ounces of the balsam of copaiba were—eleven parts essential oil to five of extract, the respective merits of which I shall hereafter mention; and from the result I feel convinced that, by separating the essential oil from the resinous extract, a very irritating and obnoxious part of the balsam is got rid of; and, moreover, in the extractive resin all the virtues of the copaiba reside.

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* This and the succeeding article were intended for the COLLECTANEA, but, having been set in the wrong type, we have inserted them here for the sake of uniformity.

I am not aware of any mention having been made by writers on Materia Medica, as to the medical qualities of either the essential oil or the extract from the copaiba. In Thomson's Dispensatory, page 295, fourth edition, in speaking of balsam of copaiba, there is the following observation: "By destructive distillation, it (the balsam of copaiba) yields some empyreumatic brownish-red oil, an acidulous water, carbonic acid gas and olefiant gas, but does not yield benzoic acid:" though, in his Conspectus, page 49, under the article of Balsam of Copaiba, the composition is mentioned as resin and volatile oil. The method by which the oil has been separated from the resin has been by dry or destructive distillation, and the oil thus produced was of a light green colour: but it was found necessary to be very careful as to the application of heat; and I can well conceive the colour of the oil, as stated by Dr. Thomson, to have arisen from the excessive heat employed in destructive distillation causing the extractive resin to come over with the essential oil, and thereby imparting to it the brownish red colour described.

* * *

In the preceding remarks on the new preparation from the balsam of copaiba, and in giving the cases in which I have tried its efficacy in gonorrhœa, and its superiority over the common form, I have merely stated facts as they have come under my notice within a very short period of time. There are some few advantages, however, as a therapeutic agent, the extract possesses over the balsam, which it may not be amiss to mention more fully than has been done in any former part of this work. The first, which is that of its not producing the nausea, any disturbance of the alimentary canal, nor the eruptions on the skin, which the balsam does. Indeed, in no instance in which I have given the extract have I seen any uneasiness produced by its exhibition: the superiority on this account was fully proved in the case of a gentleman, who requested me to prescribe for him on account of a gonorrhœa from which he was suffering; but coupled his request with the remark, that, having so frequently tried to take the balsam of copaiba in every variety of form that could be thought of, which his stomach had refused, he would rather continue to suffer from gonorrhœa than again attempt taking it; and, to use his own words, "it played the very devil with him." I determined, however, on trying what would be the effect of the extract of copaiba on this gentleman's irritable stomach. I accordingly gave him ten grains three times a-day, and the result was quite as satisfactory as in any of the preceding cases which I have cited, without producing the least sickness or any uneasiness of the stomach. The form of pills, and its being nearly tasteless, are also great advantages attached to the extract; from the facility that is afforded in increasing the dose of the medicine to a considerable quantity with so little inconvenience to the patient. In forming a comparison between the treatment proposed in the preceding observations and the usual modes of managing gonorrhœa, there must appear a decided improvement in a plan by which the patient is relieved with so little personal inconvenience. It may, however, be supposed that, in recommending the extract of copaiba in the different stages of gonorrhœa, I am holding out to the medical public a wonder working drug, which will supersede all those regulations which are so necessary when any of the secretions are inordinately affected. It must be obvious to every one acquainted with the phenomena of disease, that each affection has not a substantive existence of itself, and that the failure of cure depends on the appropriate remedy not being discovered: but that there are certain conditions on which each form of disease depends, and that a minute attention to diet, temperature, exercise, and with the use of such medicinal agents as have a known effect, can alone give the probability of success of cure. In the treatment of gonorrhœa, in whatever stage it may be, I invariably caution the patient against the use of stimulating drink: of so great importance is it, that the extract of copaiba will appear a perfectly inert preparation, unless the patient is restricted in this particular.

* * *

Mr. Tyrrell has done me the favour of trying the effects of the extract of copaiba, and given the results, and his opinion of the preparation, in the following letter:—

"According to your wish, I send you the result of those cases of gonorrhœa in which I have had an opportunity of trying your new preparation of copaiba; and I take the liberty of adding a few observations on the disease, and the ordinary modes of treatment. I shall not enter into a minute detail of each case, but merely give those points which appear to me most worthy of notice, and which I hope will be sufficient for you.

"1st Case, ætatis nineteen; first gonorrhœa. Discharge moderate and greenish; slight ardor urinæ; chordee had existed three days. To take Pil. Cal. c. Colocynth. grs. x. statim; to abstain from malt liquor or spirits. Ext. Copaibæ grs. x. (in pil.) ter quotidie.—Cured in three days.*

"2d Case, ætatis twenty-one; second gonorrhœa. Discharge profuse; ardor urinæ, and occasional chordee, existed six days. To take Pil. Calom. c. Colocynth. grs. x. statim; to abstain as the former. Pil. Extr. Copaibæ grs. x. ter quotidie, increased to grs. xv. on the fifth day.—Cured in seven days.

"3d Case, ætatis twenty; first gonorrhœa. This young man had been for some days under my care for gonorrhœa, which had existed for about three weeks before he applied to me: he had been taking the Cubebs without relief. I gave him the Balsam Copaiba with Sodæ Subcarb. and mucilage, but was obliged to omit it, as it acted so much on his bowels. His discharge was profuse, with slight ardor urinæ, but no chordee. To take Pil. Ext. Copaibæ grs. x. ter quotidie; to abstain as the other patients.—Cured in six days after commencing the pills.

"4th Case, ætatis forty; first gonorrhœa. Discharge but little, no ardor or chordee; discharge greenish, has existed two days. To take Pil. Cal. c. Col. grs. x. statim; Pil. Extr. Copaibæ grs. x. ter die; to take one glass of wine, having been used to six or eight daily. Has been five days under treatment; discharge only apparent in the morning, but not quite well.

"5th Case, ætatis fifteen. This boy had suffered from gonorrhœa for three months: he came to me with gonorrhœa, phymosis, and inflamed prepuce. Ordered

Catapl. Lini frigid. c. Lot. Saturni; Pil. Cal. c. Colocynth. grs. x. altern. noct.; to keep recumbent, support the penis and scrotum; to inject the lotion under the foreskin. In a few days the inflammation and phymosis subsided, leaving a profuse gonorrhœa, without ardor or chordee. To take Pil. Extr. Copaibæ grs. x. ter die.—Cured in five days.

"These are the only cases of which I can give a fair report. Two others have taken the pills: one I have entirely lost sight of, and the other has been to me only once (two days ago.) You will observe that, in the cases of short duration, I have been careful to act on the bowels before giving the extract of copaiba, and also that I have restricted the diet in part. I have, in fact, adopted the same plan as when prescribing the balsam itself; and in very many cases I have found the balsam equally efficacious, but there are many objections to its employment which appear to me not applicable to your preparation. Not any of the cases related here have been acute, so that I cannot speak of the utility of the extract in such cases; but my own experience in the treatment of gonorrhœa would not lead me to prescribe it during the existence of the high inflammatory stage of the disease."

Mr. FAY *on an Improved Forceps for the use of Dentists and others.*—1827.

MR. FAY, a dentist of some repute, has recently adopted a method of cutting the teeth across when they are decayed, instead of extracting them. Without offering any opinion, we subjoin his statements as given in the Transactions of the Society of Arts.

Having early in my professional career felt the greatest inconvenience from the imperfections of the instruments usually employed for the extraction of teeth, I was induced to prepare others more accurately adapted to their figure. From an attentive consideration of their structure, I was soon convinced that the *neck of the tooth* was the only part on which the necessary force could be applied with the greatest safety and advantage. Now, as the teeth do not all present the same configuration, it follows that the figure of their necks must also vary; of this fact every anatomist must be convinced. I state nothing new when I say that there are certain teeth formed very much alike, both in the upper and lower jaw, and that of the teeth thus similar to each other there are various classes, but that each class retains the same peculiarity of figure in all ages, and under all circumstances. Having stated thus much, which I think necessary in order to prepare you for what follows, I beg leave to say that I have invented a set of instruments accurately, because anatomically, suited to these several classes of teeth, a desideratum, as I believe, never before accomplished. These instruments are forceps, corresponding in number to the different classes of teeth, and suited to the same classes on the right side, and on the left, in the upper and in the lower jaw, amounting to six in number; but, as it is necessary to have two sizes of three of these, the number of extracting forceps is nine, and, by referring to the plate, it will be seen with what precision the forceps may be applied to the proper tooth. Thus I found myself in possession of a set of instruments answering the required end, because correctly adapted to the varied form of the parts to which they are intended to be applied.

The next point was to determine how the power thus possessed should be directed. The line of least resistance is that which coincides the nearest with the average direction of the axes of the roots: consequently the power should be applied more or less perpendicularly to the jaw-bone.

I do not pretend to say that I am the first person to attempt the perpendicular extraction of teeth; but I hope to show to the Society that I have accomplished that object with the simplest, the safest, and the easiest means.

The advantages which I consider these forceps to possess over all others, are briefly these:

1st. They may, as before stated, be accurately applied to the necks of the several classes of teeth: they are made to fit the necks only, never making the least pressure on the enamel or body of the teeth, and consequently may be used without any danger of breaking a carious tooth in the attempt to extract it.

2d. They never can slip when once accurately applied on the necks of the teeth; a great practical benefit.

3d. No cutting of the gum, or any other preparatory measure, is necessary, as the edges of the blades of the forceps may be at once brought upon the necks of the teeth.

4th. A provision is made by the beaked form of the extremities of the blades of the forceps designed for the extraction of the teeth having more than one root, by which means the forceps may be steadily fixed on the remains of a decayed tooth, even when the edges of such teeth are below the level of the gums. To which may be added, that they enable the operator to extract the teeth in the perpendicular direction with a less amount of force than any other instruments.

The manner of using the right-angled forceps is shortly this:—The forceps having been carefully applied on the neck of the tooth to be removed, the operator is to put a small bit of any light wood across the jaw, of a thickness sufficient to occupy the space between the joint of the forceps and the anterior teeth; then steadily seizing the handles of the instrument, he is to make a gentle semi-rotatory motion at the same time that he is pressing the handles of the instrument downwards. This motion separates more easily the vessels and membranes connecting the roots to their sockets, and surrounding the neck of the tooth; for, be it remembered, the soft parts, and not the hard, present the greatest resistance to the removal of the teeth. It might be supposed that the pressure of the piece of wood on the anterior teeth, in loosening the diseased one, would produce pain: on the contrary, it is not felt, because the action and reaction are exactly equal between the pressure on the jaw and the resistance of the tooth.

An Introductory Lecture on Human and Comparative Physiology. Delivered at the New Medical School in Aldersgate-street. By PETER M. ROGET, M.D. F.R.S. &c. Consulting Physician to Queen Charlotte's Lying-in Hospital; and senior Physician to the Northern Dispensary.—8vo. pp. 103. Longman and Co. London, 1826.

WE have always been of opinion that sufficient attention is not devoted to physiology in the course of medical education generally adopted in this metropolis, and we therefore feel pleasure in directing the notice of our readers to any thing calculated to remedy this evil. We have, indeed, made it our business to lay before the profession some account of most physiological works which have appeared within the last few years, within as short a term as possible after the date of their publication; and we are induced to notice the little volume before us because, as it was originally intended as introductory to a course of Lectures expressly on this subject, so it may, with equal propriety, be looked upon as a general introduction to any of the more extensive works, of which we have given analyses in previous Numbers. It is, in fact, an exposition of the objects and scope of Human and Comparative Physiology,—of their connexions with other sciences,—of their high rank, and unquestionable utility.

Anatomy is the first step towards all medical knowledge; it is the groundwork on which the whole superstructure is to be raised. This is universally admitted; but still it is only the groundwork, and is of little value unless the superstructure *be* raised; and we suspect that too often the student aims only at possessing this foundation, and leaves those sciences of which it forms the base for future acquirement. Dissection only shows that the body consists of various parts, "some hard, some soft, and others fluid;" but, viewed without relation to function, the most intimate acquaintance with structure is but barren and useless knowledge.

"Thus, while we confine our attention to the mere anatomy, all is perplexity and disorder; we are overwhelmed by the multiplicity of objects, and lost amidst the mass of unconnected details. But no sooner do we study the parts of the animal frame with reference to their uses, and their subserviency to the functions of the living body, than the whole appears under a new aspect. New light is thrown upon every branch of the subject, and new interest communicated to all its details. The complicated system of an animal, which, when viewed without relation to its physiology, presented nothing but intricacy and confusion, will appear, when studied with reference to the purposes of its formation, as an elaborate machine, in which order and design are every where conspicuous, and which, in the assemblage and disposal of organs, and even in the construction of the minutest fibre, displays an exquisite and transcendent skill.

"As we had observed a gradation among the physical powers which actuate the different parts of the animal machine, so we may in like manner trace a regular subordination of the functions which they exercise. The great ends to which all the arrangements of the system, and all the movements of its parts evidently point, are the welfare and preservation of the individual being which they compose, and of the race to which it belongs. Sensation and voluntary motion are thus the primary objects to which all other functions are more or less directly subservient." (P. 33.)

The Lecture is of a nature too general and elementary for analysis; and, in recommending it to our readers, we are satisfied that they will derive both pleasure and instruction from its perusal.

COLLECTANEA.

Floriferis ut apes in saltibus omnia libant,
Omnia nos, itidem, depascimur aurea dicta.

ANATOMY.

Some Directions for making and keeping Morbid Anatomical Preparations in hot Climates. By JOHN DAVY, M.D. F.R.S. (From the Edinburgh Medical and Surgical Journal.)

It is too generally supposed that the making and keeping of anatomical preparations in warm climates is almost impossible, or attended with so much difficulty as to be practically impossible, with the ordinary means within the reach of medical officers.

This is a very mistaken notion. The changes which animal matter undergoes at a temperature between 80° and 90° Fahrenheit, (the average maximum of the highest temperature in the hottest seasons, even in intertropical climates,) do not differ in *kind* from those which occur at a temperature between 45° and 55°1′, and *a fortiori* between 55° and 70°, which may be considered the average temperature of the winter and summer seasons in Great Britain. The difference, then, in the changes is chiefly in *degree*: in a hot climate they take place more rapidly than in a temperate one,—twice or thrice as rapidly, according to the elevation of temperature. This should always be kept in mind as a maxim and principle; and, to insure success in making anatomical preparations, the rapidity of change of animal matter must be met with proportional quickness and energy of the conservative processes of art opposed to the destructive ones of nature. With the same view, and against the same tendency to change and decompose, besides quickness, great neatness and cleanliness are requisite.

Every dissection should be conducted in a regular and scientific manner; according to a certain method, and with definite objects in view. The principal objects of all dissection are three:—the detection of the effects of the disease, and the cause of death; the removal of diseased parts for preservation; and the acquisition of general anatomical knowledge. Neatness, and cleanliness, and method, conduce equally to these objects. Attending to them, obscurity, confusion, and error are avoided; the pursuit loses as much as possible its disgusting aspect; it gives information of a satisfactory kind; excites interest powerfully; and, zealously pursued, becomes almost fascinating. Farther, when the dissection is conducted on these principles, it is the source of much valuable instruction. It makes the hand dextrous for surgical operations; it produces caution in deciding upon post-mortem appearances, which are so often deceptive; and habituates the eye to the nice discrimination of what is sound in structure, and what is diseased.

When any morbid appearance presents itself, the part displaying it should be carefully examined before it is removed; its situation should be noticed, and its connexions traced. If it is considered worthy of being preserved, with that intention it should be dissected out, so as to appear to the best advantage; to require as little explanation as possible; and to be, by itself, as intelligible as possible.

If dissected out neatly and cleanly at once, free from extraneous, adipose, cellular, and muscular substance, &c. much trouble will be spared and time saved. Generally speaking, indeed, the suggestion just given cannot be too strongly inculcated. For the morbid part to become a good preparation, it should be put out of hand at once; and nothing should be left that ought and can be removed by the knife and scissors. Delay breeds neglect and forgetfulness; the nicer peculiarities of the diseased part are forgotten; after a time it ceases to excite interest; as a confused mass, putrefying or bordering on putrefaction, it is a loathsome and worthless object; and thus, in consequence of not having been finished at once, it ends in being thrown away; and an aversion, rather than a fondness, is acquired towards pathological anatomy.

The present remarks are applicable to all kinds of anatomical preparations, but more especially to those which it is intended to keep in spirits, which experience has proved to be better adapted to the preservation of moist preparations than any other liquid yet tried.

The method of proceeding in preserving preparations must, to a certain extent, be modified agreeably to the nature of the morbid parts, and agreeably to the intention of the anatomist.

If the diseased part is small, and it is wished to preserve its colour, as a portion of inflamed and ulcerated stomach or intestine, it should be immersed immediately in strong spirit, and instantly put up as it is intended it should remain. After a month, the spirit may be changed for fresh spirit, and the mouth of the vessel should be firmly secured. The blood in the part will thus be coagulated and preserved; the shape will be retained without unseemly distortions, which, when once rigid, are not easily removed; and the preparation is fit for the shelf of the museum without any farther trouble.

Preparations of the brain, spinal marrow, and nerves, should be treated in the same manner; and so treated they are most easily kept.

Thus also should be managed preparations of the eye, pleuræ, peritoneum, testes, and their tunics; and, in fact, all such parts as are liable to be injured by maceration in water and incipient putrefaction.

On the contrary, parts containing much blood, as the liver, kidneys, lungs, heart,—or stained and discoloured with blood or bile, &c. as the blood-vessels and gall-bladders, &c.—or smeared with a lubricating fluid, as the aspera arteria, primæ viæ, synovial membranes, &c. should be allowed to macerate in water till fit to be removed into spirits: of course, the hotter the weather so much the shorter must be the time of maceration, and so much more frequently must the water be changed,—as often as daily, or twice or thrice daily. And, if the part be bulky and much gorged with blood, to insure success, to prevent putrefaction during the period of maceration, either a mixture of equal parts of proof spirit and water, or saturated brine, should be used in place of water alone.

If the latter (the brine) is to be employed, it should be in readiness before the dissection is commenced, and the part should be immersed in it as soon as it is taken from the body; farther, it should be exposed as short a time as possible to the air, and should not be washed before it is put into the brine.

With these precautions, the part may be macerated till all the soluble matter is removed, (changing the brine twice or thrice,) and it is rendered fit for keeping either in spirit or in brine. If the former is preferred, it should be formed of seventy parts rectified spirit, and thirty of water; if the latter, the brine should be saturated with common salt. The proportion of rectified spirit just mentioned is found to answer best for preserving preparations in general; and it is hardly necessary to add, that, unless the brine is saturated, it will fail of the desired effect.

For the useful purposes of a museum, it is necessary that the part to be kept should be not only carefully and neatly dissected out, but also carefully and neatly put up, and that immediately, and as it is intended it should appear on the shelf. If this be neglected at the moment, the season for doing it in perfection is lost. A preparation crammed into a bottle just large enough to hold it, or thrown into spirits in a large vessel, as has been too often done without attention to suspending it in a natural way, that it may be properly seen, becomes (unless it be some very simple structure) misshapen, distorted, and confused. A preparation in such a state no skill can afterwards amend; as is very well known to those who have had occasion to attempt the annoying task of endeavouring "to make something" of a preparation, perhaps highly interesting in itself, which has been thus neglected in the first instance.

Many, perhaps, will think that the measure just recommended is not easily carried into effect; that, to accomplish it, much art and skill are requisite; and that glass vessels in plenty, and of various sizes, are indispensable.

This, fortunately, is not the case: only very moderate skill is requisite, such as every medical man ought to possess, and must possess, if he is fond of his profession, and only tolerably zealous in the pursuit of it. And, instead of many glass vessels, one or two are amply sufficient for holding all the preparations a professional man is likely to be able to collect in one year in the course of his ordinary practice.

A glass vessel of the capacity of a gallon, with a large mouth, closed either with cork and bladder or a glass stopper, is very convenient for the object in question; and it may be desirable for two of them to be constantly provided, —one for the purposes of maceration, the other for those of preservation. The preparation, neatly dissected, may be advantageously attached by a thread to a piece of cork that will float on the surface of the spirit, and keep the preparation properly suspended; or, if the preparation is lighter than spirit, as a portion of lung containing air, the same object may be effected by fastening it to a bit of lead.

In this way a great many preparations may be introduced into the same vessel: indeed, the vessel may be almost filled with them without detriment, provided each ~~is free~~, and not pressed against by another, which is easily managed by using threads of different lengths. This method, it may be added, is particularly well adapted for sending preparations to England, on account of its economy, the little space required, and its security. Using it, there is no danger of the preparations being left dry and ruined by the capillary action of threads (having their ends out of the bottle) sucking up the spirit and draining the vessel: nor is there any danger of atmospheric air finding admission, provided the glass stopple or cork with which the bottle is closed is covered with moist bladder, firmly tied down, and smeared with oil when dry. Here a caution may be given, that, when bladder is thus used, the bottles should be placed out of the reach of rats, mice, and cockroaches,—

animals very fond of this membrane, and who attack it whenever it comes in their way.

Numbers written with a lead pencil on slips of paper, parchment, wood, or even the cork itself, may be introduced with the preparations when they are numerous, and there is any apprehensions of mistake; which numbers will, of course, have reference to a descriptive list that should accompany the preparations to England.

Relative to the making of dry preparations in hot climates, it will be sufficient to offer a very few observations. The unexperienced in these climates may fancy the task in question exceedingly easy, from a common and erroneous association of the ideas of proximity to the sun and parching heat. They will find it, however, a more difficult labour than can be imagined *a priori;* and for this reason, that the connexion of heat and dryness just now alluded to is, in most hot climates, of rarer occurrence than the association of high temperature with a great degree of humidity. This latter happens when the wind sweeps on its way over a great extent of sea, and on its passage becomes loaded with moisture, as is the case with the S.W. monsoon along the coast of India, the S.E. or sirocco in the Mediterranean, and the sea-breeze in the West India Islands. During the prevalence of these winds, it is very difficult to dry any anatomical preparation, and impossible, indeed, unless recourse is had to some helping circumstance, as exposure to the direct rays of the sun, or the dry heat of a charcoal fire. On the contrary, when the atmospheric heat is accompanied with dryness, as it always is when the wind comes over an extensive tract of country, such as the land-wind in India, the N.W. wind in the Ionian Islands, the S.E. on the western shore of Southern Africa, then the making of dry preparations is most easy: exposure to the wind is by itself sufficient. When dry, in every instance, the preparations should be varnished to defend them from the action of the atmosphere, and from the effect of vicissitudes in point of humidity; and then they should be carefully packed up in dried paper in a box of tight construction, to be sent home by the first opportunity.

As dry preparations of morbid parts, with the exception of bones, are of comparatively little value, nothing that is particularly interesting, capable of being kept in spirits, should be preserved in any other way.

It is not considered necessary to give any hints respecting the methods of making injected preparations. Those who have sufficient zeal for anatomical pursuits to engage in this undertaking, will have no difficulty in carrying it into effect wherever they may be, with the knowledge they must previously have acquired, and possessed of the same apparatus that is requisite in temperate climates.

In concluding, it may be remarked, that, simple and easy as are the means just now described for making and preserving morbid anatomical preparations in hot climates, they are quite adequate, and with ordinary care can never fail to succeed. Trial alone is requisite to produce conviction of their efficacy.

PHYSIOLOGY.

Action of Opium and its Constituents.—AT a late meeting of the Institute Royale, M. DE BLAINVILLE made a very interesting report on M. CHARRET's Memoir "On the Comparative Action of Opium, and its constituent Principles, on the Animal Economy."

Regarding opium as composed of meconic acid, morphine (which combines with it), of an extractive matter, and narcotin, M. Charret was anxious to compare the effects of these different substances, separated as carefully from each other as the chemistry of the present day could accomplish. In analysing carefully their action on each of the great functions of the living system, it was necessary, to render this comparison more instructive, not to confine the research to man, whether in a sound or diseased state, but to seek in less complicated machines, as in animals of different classes, what were their effects, so as the better to be able to analyse the therapeutic indications which they are capable of fulfilling. His experiments have been made—1st, on man, in health as well as in sickness, often on himself; 2d, on the mammiferæ, carnivorous as well as graminivorous animals; 3d, on birds; 4th, on reptiles; 5th, on amphibious animals; 6th, on fishes; 7th, on animals without vertebræ; 8th, on the molluscæ, &c.

On all these kinds of animals, M. Charret has remarked that the solution of opium has an effect more or less considerable, according to the development of their nervous systems. Thus, in man he has remarked that it may act in three ways: 1st, on the encephalon, there determining a sanguineous congestion; 2d, on the cephalo rachidian centre, irritating and causing convulsions; 3d, on the contractile fibre, producing a direct sedative effect.

In the mammiferæ on whom M. C. has experimented, the phenomena of cerebral congestion were either very weak or altogether wanting, and the most decided phenomena were those of irritation or sedation. Thus, a larger quantity of opium was necessary to kill such animals than for man: thirty-six grains would prove sufficient to destroy a man, while it required two drachms to destroy a small cat or rabbit.

In birds, it acts only in two ways, either by irritation or sedation; but this is besides accompanied with profound stupor, indicating a stronger congestion in the brain. There is also an intestinal flux, or diarrhœa.

In reptiles, the amphibia, and fishes, there are none of the phenomena of stimulation followed by those of nervous sedation; for it is always with signs of sedation that death happens, at least in the two last classes: for with reptiles there are sometimes signs of excitation or convulsions.

As to all the animals without vertebræ, there are no phenomena of excitation, and sedation only can be produced; and therefore they die in that state.

M. Charret thinks that opium does not act unless absorbed, and he takes his chief proof of this from the experiments of Ruysten, which he has repeated, cutting away, with loss of substance, the pneumo gastric nerves of a dog. The phenomena of narcotism took place as usual; and, besides, M. Barbier has seen a child at the breast show the same phenomena, from sucking a nurse who was under the influence of opiates. If the employment of opium is unfavourable to digestion, M. C. shows that this arises from paralysing the muscular coat of the stomach, suspending its function as a direct effect, and causing nausea and vomiting as secondary effects. Constipation from opium he thinks equally arises from the momentary paralysis of the muscular coat, and diminution of the mucous exhalation, in consequence of the increase of that of the skin.

Absorption appears not to be modified by the employment of opium. With regard to the circulation, it is certain that it causes a stagnation and engorgement in the capillary vessels. On nutrition, opium, if frequently used, has a fatal influence, and causes a kind of marasmus. The exhalation appears always to be augmented, either on the surface of the skin or on the surface of the intestines, or in the splanchnic cavities. As to the secretions, it appears to have no sensible effect on the production of tears or saliva, and probably not on the bile or the pancreatic juice: as to the urine, it is diminished if the perspiration is increased. The spermatic secretion is not affected.

M. Charret has occupied himself in observing what are the differences of action of the extract of opium, according to its mode of preparation, and also as to its being indigenous or exotic. In tincture, it is evident that the action of the opium is more energetic, from the facility of diffusion of the vehicle; therefore this form is preferable in cases of spasm, and to be avoided when congestion is dreaded. It has been said that indigenous opium does not act so well as the exotic: M. C. merely observes, that M. Vauquelin found the same quantity of morphine in both.

Opium injected into the rectum produces effects as rapid and intense as when thrown into the stomach. Applied to the skin, it produces, first, local phenomena, and then general, which tends to prove that its first effect is direct.

M. Charret has experimented on morphine, and finds that this substance, in the form of acetate, dissolved in acids, rubbed up with oil, or crystallised, has always very nearly the same effects; dissolved in alcohol, its action is more energetic. In man, he observes that morphine does not cause so much perspiration, and increases the urinary discharge. M. C. thinks it less efficacious than opium in intermittent fevers, and prefers it in cases where congestion is to be feared, and in phthisis where the sweats are to be repressed.

With regard to narcotine, its effects are extremely variable; but with M. C. its effects so much resembled those of the morphine, that, if he had not procured it from a good source, he would have doubted its purity.

M. C. concludes by regretting the very unsatisfactory chemical analysis that has yet been given of opium, and is inclined to think the watery extract the surest preparation. (*Archives Generales.*)

PATHOLOGY.

Case of Poisoning by Stramonium. By Ch. D. Meigs, m.d.—I believe that examples of poisoning by stramonium are not very common: certainly, accounts of this affection are not so very numerous as to have become fatiguing, and, as there is some difference in the statements of symptoms produced by the use of this weed, I have related the case below. When I was student of medicine, my teacher, who was much employed in practice, took me to see a young girl, who had swallowed a number of seeds for the purpose of self-destruction. She was insensible, completely tetanic, and had a very dilated pupil. She recovered.

The effects produced by stramonium on some of the first settlers of Virginia, was a high degree of intoxication.

The case which I am going to describe occurred in a girl two years and a half old, daughter of Mr. C. Stelwagen. On the 24th October, 1824, (forenoon,) she had found a small bag, containing stramonium seeds, of which she ate an unknown quantity. The first symptom was a high degree of exhilaration, in which she excited much merriment by her extravagant gestures and speeches. This soon became alarming; and when I was called to see her, she was laughing, crying, and singing, by turns, proceeding from one to the other state with the greatest rapidity. She occasionally started with great force and alarm, crying out that she was going to fall; when she would cling to her mother with as much desperation as if she was about to be thrown from a precipice. She would next become calm, then whistle, and afterwards point with her finger at muscæ volitantes, which she followed with the eye and hand, at last clutching at them, with an appearance of disappointment at the want of success.

The colour of her face was of a scarlet red. I have certainly never seen so intense a red in scarlatina. Her skin was hot; pulse much accelerated; and tongue and fauces dry and red: the former was so dry that it glistened. The face, neck, and breast were covered with hundreds of small brilliant petechiæ, many of which had a stellated form.

After an emetic, which operated very well, and brought up only one seed, I gave her senna infusion, with repeated enemata. The nurse told me she had found forty seeds in the evacuated matters.

The cerebral symptoms I have described gradually diminished till midnight, when she fell asleep. On the 25th, she was tolerably well. The petechiæ were still quite evident, not being much changed. A troublesome itching of the whole skin, which came on yesterday, was gone.

27th.—The child is well, but the petechiæ are not gone.

Nov. 4th.—They are no longer visible. (*North American Med. and Surg. Journal.*)

PRACTICAL MEDICINE.

Epilepsy.—Dr. Usher Parsons, of Providence, relates a case of epilepsy, of an obstinate character and long standing, cured by Dr. Mansfield's galvanic treatment. In this case, Dr. Parsons removed the cuticle on the back of the neck by means of a blister about the size of a sixpence, and a similar portion from the inside of the knee. To the sore on the neck he applied a small silver plate, which had a small staple affixed to its lower edge, in which was fastened a conducting wire. The wire was extended down the back into a belt of chamois leather fastened around the waist; it was continued in this belt round the side, until opposite the groin, and thence down the thigh, until it reached, and was attached to, a zinc plate placed over the sore on the knee. Dr. Mansfield's directions are to apply to the sore a small bit of sponge moistened in water, and corresponding to the denuded place in the neck. Over this, a large piece, of the same size as the metallic plate, also moistened, is to be laid; and next to this the plate itself, which must be secured by adhesive straps. The wire down the back should be long enough to permit free motion of the body. The zinc plate at the knee is to be fastened in the same manner, with the exception that, for the second layer of sponge, a layer of muscle must be substituted. The apparatus will continue in gentle action from twelve to twenty-four hours; when the sores require cleansing, as well as the plates. Dr. Parsons applied this apparatus to his patient, who discontinued its use after a perseverance in it of six months; and, although two years have elapsed, he has not had an epileptic paroxysm since the date of its first application. (*New England Journal of Medicine and Surgery.*)

Asthma.—Dr. CHIARENTI having often observed the good effects of sudden exposure to the fresh air, particularly with the face opposed to the wind, in paroxysms of asthma, tried, during a paroxysm of this disease, to which he himself is subject, to introduce the tube of a pair of bellows into his mouth, and to blow with force a great quantity of air into the lungs. The event justified his attempt, and by the aid of this simple operation he can, in a very short time, overcome the most violent attacks of asthma. After repeatedly trying this experiment on himself, he tried it on others, and with the same success. Dr. Chiarenti, from the numerous facts he has collected on the subject, believes he may confidently assert that this insufflation of air into the lungs is not only capable of instantly arresting a paroxysm, but even of radically curing the disease, provided it is not the result of organic alterations!! (*Annali Universali di Medicina.*)

Amaurosis cured by Tartar Emetic.—A woman, named Baldini, ætatis thirty, when ten years old was, after a prolonged fever, seized with paralytic trembling all over the body. Two months after, severe pain came on in the orbit of the right eye; the paralytic tremblings ceased, and were succeeded by complete amaurosis of the right eye. The pain of the orbit, and parts around it, continued till she was twenty-one years old, when an abundant mucous discharge from the nostrils came on, and the pains ceased. In the month of November, 1825, the pain returned, and fixed in the left eye, becoming extremely violent. The faculty of sight was soon nearly lost, so that she could hardly distinguish night from day. Local and general bleedings, purgatives, and blisters, were in turn employed without success.

When this patient came into the hospital, the eye showed no external lesion; the pupil was dilated; and a similar dilatation, with insensibility of the pupil to light, existed on the right side. In the bottom of the eye, something whitish and horny looking could be perceived; there was also strabismus. The patient having refused the introduction of a seton in the nape of the neck, a vegetable infusion was prescribed, to which was added a grain of tartar emetic.

Second day.—Two grains were given, which produced vomiting.

Third day.—The patient could distinguish various objects with her left eye.

The same treatment, increasing the dose to three grains, was continued to the seventeenth day, when the left eye had quite recovered its power of vision, and with the right she could distinguish the buttons on a coat. (*Ibid.*)

Observations on the Inexpediency of sending Consumptive Patients to Madeira. By A. H. RENTON, M.D. (From the Edinburgh Med. and Surg. Journal.)

The object of the following observations is to save from much unnecessary suffering and inconvenience a hapless class of beings, for whose relief but little can be done by medicine, and whose fate the most callous of us must necessarily deplore. I allude to those invalids sent hither from England in the last stage of pulmonary consumption.

It would be foreign to the intention of this communication, to make any remarks on the nature of the symptoms which indicate diseased lungs, or to say a word about the cure of a disease which, in its advanced stages at least, most medical men believe to be, in the present state of our knowledge, irremediable. No unusual share of acuteness is necessary to detect confirmed consumption, and still less is requisite in forming an opinion as to its result. My only object is to call the attention of my professional brethren to the inutility—I had almost said the cruelty—of the practice of annually banishing from home and its comforts a host of devoted victims, whose very hours are numbered, and who are thus, by the decision of their medical attendant, deprived of the only consolation which can be afforded them in their descent to the grave, the society and soothing attention of affectionate relatives. The increasing frequency of this practice shows that the judicious remarks of others on this subject have been neglected, and that the following observations may not be unnecessary.

That this measure is frequently adopted merely to gratify the wishes of the unfortunate sufferer, or those of his friends who are, naturally enough, anxious to leave nothing untried in their search for means of relief, is probably true. But it is evident, both from his own account, and from the written statement which he brings with him, and which but too frequently holds out the most flattering hopes of recovery to breathless, I may say *lungless*, objects, worn down to the bone by profuse colliquative discharges, that, generally speaking, the patient himself has little to say in the arrangement; and that it is principally in obedience to medical advice that he undertakes a voyage, productive of nothing but mischief and disappointment. What object a practitioner can have in view in sending invalids abroad in such hopeless circumstances, it is difficult to conceive. One would suppose that the dissection of a single body dead of phthisis, which had run its ordinary course, would be sufficient to convince the firmest believer in the certainty of the efficacy of our art, that neither change of climate, nor any known means, can avail in the repair of such extensive disorganisation, as must evidently have existed for a long time previous to the death of the subject. As to any relief from suffering which is obtained by dragging out the last few months of existence in a warmer climate, the inconvenience which is invariably experienced during the first (and of his the whole) part of a residence abroad, would more than counterbalance it, were it much more considerable than it actually is; for he must know little of his own kind who is not aware of the difference between the comfort which is to be derived from the watchful attendance of attached friends, and that to be expected from the usual, however kindly offered or well intended, civilities of a stranger. So uniform is the result of this practice, that the annual importation of invalids from England is thought a fit subject for ridicule. "La vai mais hum Inglez a Laranjeira;" —there goes another Englishman to the Orange-tree, (the Protestant burying ground,)—has become the joke among the boatmen on landing these unfortunates on the island.

The following table, limited as it is, will give a tolerably correct idea of what is to be expected from a residence here in lung cases. It is taken from those of which I happen to have memoranda, and which form a part of those which have been sent here during the course of the last eight years. It does not include the invalids who have come out this winter, many of whom will never see their native shores again.

In the cases marked Confirmed Phthisis, there were copious purulent expectoration, diarrhœa, &c. and almost all of them terminated fatally here. I examined the bodies of fifteen of them after death, in the presence of some of my professional friends; and in every instance the lungs were found almost completely disorganised. The extent to which the process of disorganisation may proceed before death, is better exemplified here than in Britain, as the patient's progress, *à son heure suprême*, is less liable to be hastened by accidental inflammatory attack. In some of them the pulmonary symptoms were stated to be merely secondary, and the liver was denounced as the offender in chief; but in only one instance (that of a gentleman from Scotland, in whom that organ was found enormously enlarged, and of which there was sufficient evidence before death,) was there found the slightest deviation from healthy structure in any of the other cavities. From this I exclude intestinal ulcerations, which are so generally met with whenever the disease has had an opportunity of running its victim completely down.

Some of those marked Incipient Phthisis, were probably not fully entitled to an appellation so ominous. Their general character was young people who were said to have "overgrown themselves," and who had been subject in England to inflammatory attacks, having cough, &c. Others had suffered from neglected or mistreated inflammation, and in many there was a strong family predisposition to pulmonary disease. Most of them, I have little doubt, would now have been in their graves but for the precautionary measure which was adopted.

The other diseases were asthma, scrofulous glandular enlargements, and rheumatism, all of which were benefited by a residence here.

Cases of Confirmed Phthisis		47
Of these, there died here within six months after their arrival	32	
went home in summer, and returned and died	6	
left the island, but of whose death we have heard	6	
and not since heard of (probably dead)	3	
Case of Incipient Phthisis		35
Of these, there left the island, much improved in health, and of whom we have had good accounts	26	
also improved, but not since heard of	5	
and have since died	4	
Other diseases		15
		97

From this it appears that there are in England two sorts of cases in which transportation is recommended,—those which are curable, and (principally) those which are not. Regarding the latter order, I shall merely observe that, in cases of the common tubercular phthisis, in which suppuration has commenced, a prolongation of existence, (and that under severe restrictions,) is all that a residence here can be expected to afford. When it has proceeded to any considerable extent, I should consider it the duty of a medical attendant not only not to advise the adoption of such a measure, but most earnestly to dissuade from it those who, from hearsay evidence of the recovery of others in circumstances similar to their own, may feel disposed to fly to it as a last resource.

That great and lasting benefit is to be derived from even a temporary residence in this climate, which is probably inferior to no other in cases where pulmonary disease is merely threatened, or where strong family predisposition to it exists, many living examples sufficiently prove. But, even under such comparatively favourable circumstances, it ought to be strongly impressed on the mind of the invalid, that half measures are worse than useless; and that no advantage is to be derived from climate, however fine, unless it be steadily seconded by the utmost caution and prudence on his part.

SURGERY.

Observations on Laryngotomy and Tracheotomy. (From a Clinical Lecture delivered to the Students of Surgery in the Royal Infirmary of Edinburgh, by GEORGE BALLINGALL, M.D. F.R.S.E. &c.)

On going round the ward on the 10th of January, this man (John Yule) was reported to me as suffering from sore-throat, but did not attract my particular attention, nor did I observe any thing about him calculated to give me alarm. On the evening, however, of that day, he became affected with marked symptoms of laryngitis. Dr. Lubbock, the house-surgeon, very promptly abstracted forty ounces of blood, administered an antimonial solution, and ordered the application of leeches to the larynx. By these means the disease seemed for a time to have been arrested. The patient's symptoms were alleviated; and, on my visiting him about ten P.M., he expressed himself much easier, breathed with less effort, and with less of that stridulous noise characteristic of the complaint under which he laboured. When I visited him again on the following morning, his symptoms had become very alarming; his pulse 120, and weak; his voice enfeebled; his respiration laborious, and his countenance livid. After a moment's consultation with my colleague Dr. Campbell, who accompanied me, I proceeded to open the windpipe, making a crucial incision down through the cricoid cartilage, and inserting a silver tube into the trachea: the patient, who at this moment had ceased to breathe, and was thought to be dead, began again to respire; his pulse, which was for some moments imperceptible, became again distinguishable at the wrist. He swallowed some brandy and water, and survived till three in the afternoon.

* * * In speaking of the proper points for perforating the windpipe, I adverted to the division of this operation into laryngotomy and tracheotomy, and endeavoured to point out the cases in which the one or the other was the preferable operation. In cases like the present, where the patient runs a risk of suffocation from œdematous swelling of the rima glottidis, and where there is no reason to believe that the inflammation extends further down, it may be sufficient to make the perforation where I did. And this is the situation where, of all others, from the thinness of the superincumbent parts, it may be most readily accomplished. The operation has been represented as one which may be as easily performed as bleeding in the arm; and in a case of this kind it certainly may be so, where the obstruction is entirely within, and no swelling of the neck without: but you had a very recent opportunity of seeing how much circumstances are altered in some particular cases.

On the evening of the 5th of February, a female patient of Dr. Spens's was reported to me as labouring under cynanche parotidea; and, while in the middle of my clinical lecture, one of the house surgeons came in and reported to me that this patient was so much worse as to lead him to apprehend immediate suffocation. On visiting her along with you, I found her affected with a very large swelling on the left side of the jaw, involving the parotid, the submaxillary glands, and the tonsils, and extending down over the neck. Her respiration was extremely difficult, and her face turgid. I was told that she had been admitted with fever about three weeks before, and that this swelling having recently supervened, it had partially suppurated on the surface, and had been opened. This opening I proceeded, in the first place, to enlarge, thinking that by this means I might give vent to matter, and relieve the urgent symptoms. This, however, gave no relief, and produced no diminution of the internal swelling; which, upon introducing my finger into the mouth, I found to extend across the fauces, covering the aperture of the glottis, and thus producing a mechanical obstruction to the admission of the air. Although I considered the case almost desperate, and mentioned to you at the time that she might possibly not survive half an hour, yet, as the patient was comparatively a young woman, and her pulse pretty firm, I considered it my duty to obviate the risk of suffocation by making an opening into the windpipe. As the obstruction in this case was not from any thing within the tube, but from the tumor covering its orifice, it was obvious that an opening into any part of it below that orifice would answer my purpose; and I made a longitudinal incision along the fore part of the larynx, with a view of perforating the crico-thyroid membrane. From the turgid state of all the vessels in the neck, a considerable hemorrhage took place, not from any vessel of sufficient magnitude to be tied, but a general oozing, particularly from the upper and lower extremities of the wound, in such quantity as to induce me to defer opening the trachea until it should be suppressed. The hemorrhage from the lower angle of the wound was a matter of indifference, because, by putting the patient in an erect posture, and perforating above the bleeding point, the entrance of the blood into the trachea could be easily prevented; but the admission of blood into the tube from the upper point of the incision was not so easily obviated. I therefore attemped to restrain the bleeding by pinching up a portion of the cellular substance, and surrounding it with a ligature; but, this not proving sufficient, I applied a piece of caustic to the bleeding point, and partly by this means, partly by exposure to the air, the hemorrhage was in a few minutes suppressed; when I completed the operation by slitting open a portion of the larynx, and introducing a silver tube. This was in some measure done at random, from the parts not being distinctly marked, and from my being afraid of renewing the hemorrhage by dissecting them more completely. The patient, as was to be feared, sunk rapidly, and died in about twenty minutes after the operation. The parts were exhibited to you at the following lecture, and are now deposited in the Museum of the Royal College of Surgeons. The aperture was found, as I told you it would be, in the lower part of the thyroid cartilage, between its alæ, and extending downwards to the crico-thyroid membrane.

Now, gentlemen, what I wish you particularly to observe is, the remarkable contrast between these two cases. In the former, the patient was a robust male, advanced in life; the neck unincumbered with fat, and free from any adventitious swelling; the pomum Adami prominent; the cartilages hard; and the different parts of the larynx so well marked, that they might have been demonstrated through the superincumbent integuments. In the other case, the patient was a female, comparatively young, the neck swollen, and the blood-vessels turgid; the larynx not prominent, nor its cartilages hard. No two cases could give a better illustration of the different circumstances attending the performance of this particular operation; and no two cases could better illustrate the general advantages of clinical observation. In the one case, there was scarcely as much blood lost as would soil one's fingers: in the other, a hemorrhage, which although of no great amount, yet it became an important object to suppress; for, had any part of the blood got into the trachea in this patient's enfeebled state, it would, I apprehend, have produced immediate suffocation,—the very occurrence which I was called upon to prevent. In the one case, the operation was as simple, smooth, and easy, as ever it was described in a system of surgery; in the other, it was such as you must sometimes expect to meet with in the realities of life.

With these two cases of bronchotomy, those gentlemen who were here in the early part of the season had an opportunity of comparing that of Betty Oswald, a patient of mine, who was admitted into the hospital immediately after having been delivered of a natural child, and having made an attempt at suicide, in which she had divided the lower part of the larynx by a ragged unequal wound. This wound was, I may say, completely closed, and no air passing through it, when the patient was seized with inflammatory symptoms in the trachea, stridulous breathing, and sense of impending suffocation. These symptoms were relieved by making a perpendicular incision into the larynx, from the site of the original wound down through the cricoid cartilage. The aperture thus made was again diminished to a very small extent, when a recurrence of the urgent symptoms induced the house surgeon again to enlarge the wound; and this, aided by general and local bleeding, succeeded in rescuing the patient from the very alarming state in which she was for some days. In this case it appeared that some impediment had been formed to the restoration of the natural channel for breathing by the aperture of the glottis, perhaps in consequence of some deposition of lymph from the severe inflammatory attacks which she had sustained. All attempts to close the wound in the larynx were now abandoned, and the patient became habituated to the use of a silver tube in the wound, through which she breathed with tolerable comfort, and in this state she left the hospital.

Wound of the Radial Artery; with Observations on Hemorrhage. (From a Clinical Lecture, &c. by Dr. GEORGE BALLINGALL.)

The next case which I shall notice is that of Thomas Sutherland, who was admitted into hospital on the 6th January, having received a small wound from a piece of bottle-glass, opening the radial artery at the point where it comes out from beneath the extensor tendons of the thumb, and passes between the metacarpal bones of the thumb and fore-finger towards the palm of the hand. The house surgeon, finding it impossible to secure the artery in the wound, had passed a ligature upon it immediately above the carpus, at the same time introducing a piece of sponge into the wound. On the evening of the 9th, bleeding occurred from the original wound, preceded by pain and swelling in the fore-arm, with some degree of symptomatic fever; for which leeches had been applied to the arm, and a poultice to the hand. The hemorrhage was again suppressed by the sponge, and nothing unfavourable occurred until the evening of the 11th, when hemorrhage took place from the radial artery, where it had been tied above the wrist. I immediately enlarged the wound upwards and downwards, and passed two ligatures around the artery, one above, and the other below the bleeding point. Hemorrhage recurred two or three times from the original wound on the 14th, and was easily restrained by moderate pressure.

On the morning of the 15th, I was called to this patient in consequence of another hemorrhage from the primary wound. This had ceased before I reached the hospital; but, upon examining the hand, I found it swollen and tense, with a collection of purulent matter under the integuments of the metacarpus. This was discharged by an incision of about an inch and a half in length across the back of the hand; and between two and three o'clock of the same day I was called away from my class in the College, in consequence of a recurrence of the hemorrhage from this man's hand. I now extended the original wound upwards and downwards, and made an attempt to secure the bleeding vessel; but this I found impossible, on account of the ulcerated, or rather sloughy, state of the parts, in consequence of which the ligature would not keep its hold. I ascertained, however, (upon this, the first occasion on which I had myself seen the hemorrhage from this wound,) that the blood came distinctly from the superior extremity of the wounded artery, and that it was not in any degree commanded by pressure on the ulnar, proving that it was not supplied, as I had hitherto supposed, by the inosculations between the radial and ulnar arteries in the palm of the hand. I therefore directed one of the dressers to restrain the hemorrhage by pressing a piece of sponge upon the bleeding orifice, and requested my colleagues to meet me at six o'clock, after the clinical lecture. I then proceeded, with their approbation, to tie the humeral artery a little below the middle of the arm, and from this time all further hemorrhage ceased. The ligatures upon the radial artery separated in a few days, and that upon the brachial on the fifteenth day after its application; the wounds healed kindly, although slowly; and the man has been recently discharged, with the motions of his arm unimpaired.

In speaking of this case, I illustrated it by a reference to numerous others in the writings of Gooch, O'Halleran, White, Hodgson, Guthrie, and Turner. I observed that this case, however troublesome it had proved, was by no means singular, nor even very rare. I showed you that, in one case quoted by Gooch, a young man lost his life in consequence of a wound of this artery; and that in another case, related by O'Halleran, after repeated hemorrhages for a month, the limb was amputated. I find also that the frequency of secondary hemorrhage from this artery was a circumstance which did not elude the comprehensive grasp of John Hunter's mighty mind. In a manuscript copy of notes from his lectures, in Dr. Knox's possession, Mr. Hunter mentions the radial and ulnar arteries as those, of all others, most prone to secondary hemorrhage from ulceration of their coats; and my colleague, Dr. Campbell, has called my attention to a peculiarity in the situation of these two arteries, which is well worth noticing in any attempt to account for this. You will recollect that these vessels run for a considerable space on the lower part of the fore-arm, covered only by the common integuments above, and supported beneath by parts almost purely tendinous: the former circumstance rendering them more liable to injury; and the latter, perhaps, leading to their more frequent ulceration, in consequence of a less intimate and vital connexion with the contiguous parts. But, to return to the fact, and to the particulars of Sutherland's case, you will recollect that I pointed out, on one of Rosenmuller's plates, the inosculations by which I conceived the repeated hemorrhages in this instance to have been supplied, through the medium of what my late distinguished master, Dr. Barclay, has termed the ancono-carpal arch, formed by the anastamoses of the extreme branches of the interosseal with the radial and ulnar arteries on the back part of the carpus.

This case forces strongly upon our minds the singular revolution which has taken place in the opinions of surgeons relative to the ligature of arteries within the last sixty years. *They* were formerly afraid to tie any considerable artery, for fear of mortification of the limb: *we* are now apprehensive that the ligature of a main trunk may prove insufficient to suppress a hemorrhage from one of its minor branches. "When the brachial or femoral artery is wounded, though the patient should not perish by the hemorrhage, the limb must soon die for want of nourishment." This was the language of Gooch in 1767. "When circumstances tending to prevent the establishment of a collateral circulation do not exist, we need not apprehend the death of any part in consequence of a deficient supply of blood after the ligature of its main artery." This was the language of Hodgson in 1815; and if you look into the accurate and instructive work of this author, you will find a case in which the ligature of the brachial was found insufficient to suppress a hemorrhage from this same unlucky radial artery; the wounds of which, I may safely assert, have given more trouble to surgeons, and proved more disastrous to patients, than those of any other artery of a corresponding magnitude in the system. Surgeons have sometimes been made to pay in purse, as well as in person, for the mismanagement of such cases. Of this I recollect a remarkable instance which occurred in a provincial town in England, not many years ago, where a surgeon was prosecuted, and cast in damages, at the suit of a cooper, who had lost the use of his arm, and was disabled from following his trade, in consequence of the tight bandaging employed to restrain a hemorrhage from the radial artery. This case was strongly impressed upon my recollection by a very extraordinary coincidence: while reading the newspaper report of it in the mess-room at Nottingham, where I was then quartered with the 33d regiment, I was called to the assistance of a soldier who had accidentally wounded his radial artery in whetting his razor; and, having the fear of tight bandages fully before my eyes, I of course proceeded to secure the wounded vessel with ligatures.

Removal of the Os Astragalus.—Dr. Alexander H. Stevens, professor of surgery in New York, removed, last summer, the astragalus, after a compound luxation of the ankle-joint, otherwise irreducible. The man has recovered, with very trifling deformity of the foot, and with a *flexible joint*. He walks with very slight lameness. (*North American Med. and Surg. Journal.*)

MISCELLANEOUS.

Effects of Green Tea. By W. Newnham, Esq.—During the spring and summer of the year 1822, I was attacked by increased arterial action of the cerebral vessels, for which I was twice bled largely, besides repeated leeching, and the uniform pursuit of a strictly antiphlogistic system of diet and medicine. But the distressing headache, throbbing of the carotid arteries, &c. were only palliated, not dissipated, by these means. Nor is this wonderful; for the malady had been slowly creeping upon me for a very long time, and had only been roused into the state of acute suffering by a course of intemperate study. Having often formerly found relief from taking green tea for less severe headache, I determined upon giving it a trial. The pain was very intense when I first employed the remedy, and I never shall forget its effects. It was a strong infusion, and very soon after I had swallowed it the severity of the pain was diminished, and a delightful calm stole upon me. This was accompanied with considerable exhilaration of spirits; but I am unable to say if this arose from the pleasing consciousness of diminished suffering, and of being in possession of an agent capable of controlling the excessive action of the cerebral vessels, or from the immediate effect upon the brain of the agent itself.

'This quiet calm speedily gave way to a variety of very painful sensations,—an almost insupportable anxiety about the præcordia, palpitation and fluttering of the heart, general tremor, and a peculiar distress, which I have always found it impossible to define or describe by words. During all this time my spirits did not forsake me; for I felt that my head was better, and I had suffered so much and so long from the state of that organ, that to obtain a prospect of relief was a source of unspeakable pleasure. My friends saw, and were alarmed by the effect of the tea; but I assured them I was better, and that I would, on no account, exchange my present distress for the dominion of my old enemy, headache. The symptoms of agitation gradually subsided, and I slept that night with a greater degree of quiet than before. During the progress of my illness, I again had recourse daily, for some time, to the same remedy, and always with the effect of quieting the excitement, as well as with the recurrence of the same symptoms of anxiety and oppression, but in a minor degree of intensity. It appeared to me that its first and immediate influence was exerted on the brain, and that the centre of the vascular system was affected secondarily, and as a consequence of such influence. The circumstances related will, however, clearly prove that the agency of this infusion, in arresting cerebral excitement, is very considerable, and that it is well deserving the attention of the profession.

This sketch would scarcely be complete, unless I were to state the effect of green tea upon myself subsequent to my restoration to health. Having now for some years lost all traces of my former headaches, there has been no brainular irritation to subdue, consequently the remedy has been taken rather as a luxury than a medicine, and only at my usual hour of drinking tea, about nine o'clock. When this has been the case under common circumstances, it has generally happened that slight symptoms of præcordial anxiety, and a very wakeful night, have followed: but, if the brain shall have been more than ordinarily excited by any animated conversation during the evening, or by late and close attention to connected thought, the uneasiness about the heart has vanished, and the sleep has been most refreshing.

Thus satisfied of the salutary influence of green tea upon a peculiar morbid action of the cerebral system, I felt anxious to inquire what would be its effect during a state of health, and I determined on submitting myself and my pupils, Mr. Carter and Mr. Nichols, to its influence. I had taken care that the latter gentlemen should not be informed of the effects which might be expected from the experiment, in order that I might secure an unbiassed report of their sensations.

An ounce of the very best gunpowder tea was infused in a pint of boiling water for twenty minutes, and divided into three portions, of which each took one. On myself, the symptoms produced were precisely such as have been before described, except that, as there was no disease to combat, so, consequently, the delightful sensation arising from the control of such malady was wanting. Hence I experienced all the anxiety and oppression, with less of the pleasurable feeling; but I could not mistake the old effects, although they were not so violent in degree. My pulse, which before taking the tea was perfectly regular at eighty strokes in the minute, was at first quickened and rendered fuller, but in fifteen minutes it had again fallen to eighty, and had become very irregular and intermitting; in half an hour it had fallen to seventy-six, and continued exceedingly irregular. A feeling of anxiety oppressed the heart, and a general tremor had come on, and remained for some hours, and indeed, to a certain extent, for the remainder of the day. The same experiment, repeated ten days afterwards, was attended with precisely similar results.

On Mr. Carter, the immediate effect upon the pulse was that of quickening it; but it afterwards fell below its natural standard, and became irregular and intermitting. The sensations he described to me were those of temporary exaltation; "he felt a greater degree of confidence in himself;" which, however, quickly gave way to oppression and anxiety about the heart, palpitation, a slight degree of nausea, general tremor, and a feeling of debility, as if his knees refused to do their office in supporting the body;—all circumstances which, as an independent and unsophisticated testimony, go far towards confirming the position before laid down, that the agency of green tea is exerted principally on the nervous system, and through it upon the several functions of the animal machine.

The influence of this medicine in controlling the inordinate excitement of the vessels of the brain, was even more particularly elucidated in the case of Mr. Nichols. Without being aware that it might have any effect upon the experiment, this gentleman had taken for his lunch, about an hour previously, some Edinburgh ale. His pulse was at ninety-two, with a hurried, vibrating action; but, shortly after taking the tea, it was reduced to eighty-four, and even eighty, while his feelings were those only of increased comfort. Disposed to smile at his fellow pupil's uneasiness, and to ascribe it to peculiarity of constitution, he came to a repetition of the experiment with great pleasure. But on this occasion no potation of Edinburgh ale had preceded that of the tea: his pulse was, as before, considerably reduced in frequency, and became very feeble and fluttering; while his sensations of uneasiness about the heart, general tremor, and debility, were not a little distressing to him for some hours, and scarcely even completely subsided during the remainder of the day.

The sequel of my pupil's history is too characteristically illustrative of the mutual action and reaction of green tea and alcoholic stimuli, to be omitted. It so chanced that, during a few months' residence with me last summer, I was in the frequent habit of taking green tea in the evening. Upon these occasions, he invariably complained next morning of a wretched, sleepless, and miserable night. I took this opportunity of watching the influence of wine and strong beer upon this state of nervous irritability; and, whenever either of these were taken after a cup of green tea, the wakefulness and general distress were not present. (From *Some Observations on the Medicinal and Dietetic Properties of Green Tea.*)

Vaccination.—At a late meeting of the Academie de Medicine, M. P. Dubois read the Annual Report of the Commission for Vaccination in France for 1825. This report contains, among other remarkable things, a discussion on the fact that M. Kergaradec had communicated from M. Guillon de St. Pol-de-Leon, at a former meeting. It will be recollected that this physician asserted that he had produced the true vaccine influence with the matter taken from a varioloid patient; and, consequently, that this matter and that of the vaccine virus were the same. The commission in their opinion express doubts of the reality of the results that M. Guillon says he obtained. They cannot be persuaded that varioloid matter can produce vaccination, nor that there can be any identity between the diseases. But supposing it to be true, there are two reasons which should prevent any use being made of the discovery: the one is, that the varioloid is not easily distinguished from true small-pox, except towards the end; it would therefore be to be feared that most practitioners would be deceived, and communicate the small-pox instead of the varioloid or vaccine. The second reason is, that the efficacy of the vaccine virus being proved by thousands of proofs, it is unnecessary to seek a new antidote to small pox, where we already have one sure and free from danger. (*Revue Medicale.*)

INTELLIGENCE.

MONTHLY REPORT OF PREVALENT DISEASES.

AGUE, which we mentioned in our last report as more prevalent than usual, has continued to be frequently met with; and even common fever has assumed an aguish character.—We have examined an interesting case of a *blue boy*, nine months old, in whom a communication, large enough to admit the point of the forefinger, existed between the auricles and also between the ventricles, at the upper part of the interventricular septum.—The only other cases of interest which we have met with are two instances of Tic Douloureux, which are doing well under the use of Carbonate of Iron.

On the Application of Leeches. By S. G. LAWRANCE, Esq. Assistant Surgeon of the Royal Military Asylum, Chelsea.

SIR,—From a conviction that every endeavour to diminish human suffering, and to reconcile the mind to the remedies employed, by adapting them as much as possible to the feelings and prejudices of the patient, is an object well worthy of medical attention, I am induced to offer the following suggestions to your notice, and to request their insertion in your valuable and widely circulated Journal.

As in many diseases the local abstraction of blood by leeches is a very important means of cure, I am desirous of introducing to the notice of your readers a method which I have adopted and employed for some time, with much success, in procuring a larger quantity of blood from the application of a given number of leeches than is usually obtained.

The method consists in applying a cupping-glass, having a brass exhausting syringe fitted to it, over the bleeding orifices left by the leeches, immediately after they have fallen off, and exhausting the air, when the blood will flow freely into the glass, as in cupping with a scarificator. When the glass is nearly full, it is to be removed, cleansed, and reapplied, until it is perceived that the orifices cease to bleed.

By these means I have frequently been able to abstract, in a very short time, from three to four ounces of blood after the application of six or eight leeches to the temples, and from two to three ounces after the application of a similar number to the neck; but the quantity must necessarily vary according to the vascularity of the part to which the leeches are applied.

The size of the leeches also makes a considerable difference; for, in several experiments made for the express purpose, I found that I was able to abstract from one to two ounces of blood after the application of *two large leeches* to the temple, and only about half that quantity from *two small leeches* applied to the other temple of the same individual. I therefore recommend large leeches to be used.

Leeches also are often so scarce and so expensive, that it becomes a very desirable object to procure as much blood as possible from a small number of them.

The method above described appears to me to be peculiarly applicable to timid persons and to children, who always have a great dread of cutting instruments; likewise to females, who frequently express considerable aversion to cupping with the scarificator, in consequence of the permanent marks left by that instrument; whereas, the leech-bites soon heal, and after a few weeks the marks are scarcely discernible, and in most instances are totally obliterated.

It is also preferable to the customary mode of fomenting the bleeding orifices with warm water after the leeches have fallen off; for the continual oozing of blood which succeeds often keeps the patient in a very restless and uncomfortable state for many hours, and the quantity lost can never be correctly ascertained: whereas, after adopting the method proposed and above described, all bleeding from the orifices ceases, and the quantity of blood abstracted is accurately known.

In urgent or formidable cases, where it is absolutely necessary to take away twelve or fourteen ounces of blood, locally and speedily, cupping with the scarificator, in the usual way, must be resorted to; but in many others, such as inflammations of the eyes, slight affections of the head, &c. I am inclined to think the above method will be found of much utility. In the operation, however, it will be necessary to attend to the following directions:—

1st. To employ rather large-sized leeches, and so apply them that the orifices they leave may be sufficiently close to be included within the circumference of a small cupping-glass.

2dly. In exhausting the air, care must be taken not to do it too forcibly; for in that case the edge of the glass will act like a ligature, and prevent the free flow of blood. When the air is sufficiently exhausted, and the glass adheres, the syringe may be taken off, and a small brass cap screwed in its place over the valve, which will effectually prevent the ingress of air.

3dly. When the glass is removed with the blood, (which is to be emptied into a graduated glass measure,) it must be cleansed in hot water, and wiped before its reapplication; otherwise some fluid may be sucked up into the barrel of the syringe while exhausting the air, and thus obstruct the valve, and prevent its acting properly.

The instruments I have generally employed are those sold for cupping the temples, having only rather larger glasses.

I am, Sir, your obedient humble servant,

S. G. LAWRANCE.

To the Editor of the
London Medical and Physical Journal.

Application of the Stomach Pump in a Case of Intoxication.

Sir,—Having had an opportunity of trying the efficacy of the stomach pump, I send you the case as an additional instance of the important utility of this instrument.

John Albin, private soldier, second battalion Grenadier Guards, was brought into hospital on the evening of June 15th, 1826, by his comrades, in a state of total insensibility, from a public-house in the neighbourhood of the barracks, where he had been drinking whiskey to great excess. The symptoms were a livid and tumid countenance; stertorous breathing; a viscid, frothy discharge from the mouth; the pulse slow and laborious; extremities cold. Two pounds of blood were suddenly taken from the external jugular vein and arm at the same time. Half a drachm of the Sulphate of Zinc, dissolved in an ounce of water, was then administered by the mouth, and repeated in ten or fifteen minutes, without any material effect. The stomach pump, which had been sent for, was shortly after this introduced into the stomach, and about a pint of fluid extracted; which, from its strong smell, appeared to be nearly raw spirits. Some warm water being injected, was also extracted by the same means, still much impregnated with the smell of spirits. Within half an hour after this operation, the breathing became much more easy, and the pulse more free. He remained in a state of coma. Blisters were applied to the nape of the neck and exterior surface of the legs. Ten grains of Calomel in a bolus were directed to be given, and two ounces of Epsom Salts in solution, in divided doses, during the night.

At seven the following morning, he still remained in a comatose state. The pulse, however, had become more frequent, fuller, and softer; breathing easy; with a general warmth diffused over the surface of the body. He had passed his evacuations involuntarily. Towards noon he showed symptoms of returning sensation, attempted to speak, and made an effort to get up. Being placed on the night-chair, he passed a very copious evacuation; and from this period his recovery was progressive.

Your obedient servant, J. HARRISON.

Westminster Hospital.—Mr. GUTHRIE has been appointed fourth surgeon to this hospital. Mr. HARDING, we understand, will not be opposed in his canvass for the office of assistant surgeon.

St. George's Hospital.—Sir E. HOME has been appointed consulting surgeon, and Mr. ROSE unanimously elected surgeon.

Middlesex Hospital.—Dr. WATSON has been elected physician in the room of Dr. SOUTHEY.

University of Glasgow.—We understand that the medical chair is to be filled by Dr. BADHAM.

Literary Notice.—Dr. RUCCO has in the press a work on the Science of the Pulse, as applied to the Practice of Medicine.

MONTHLY LIST OF MEDICAL BOOKS.

[*No books can be entered on this List except those sent to us for the purpose; as, in the list hitherto transmitted, the names of works have frequently been given as published, which have not appeared for weeks, or even months, after.*]

Pathological and Practical Observations on Spinal Diseases: illustrated with Cases and Engravings. Also, an Inquiry into the Origin and Cure of Distorted Limbs. By EDWARD HARRISON, M.D. F.R.A.S. ED.; formerly President of the Royal Medical and Royal Physical Societies of Edinburgh, &c. &c.—Royal 8vo. pp. 294; with Engravings. London, 1827.

An Essay on Gout: in which its actual Predisponent, Proximate, and Exciting Causes are clearly defined; and its Preventive and Curative Indications fully demonstrated, upon new Pathological Principles, which exhibit a more consistent, safe, and efficient Method of Treatment than any hitherto promulgated. To which are added, Observations on the Modus Operandi of Bath Waters in Gouty Habits. By P. P. P. MYDDELTON, M.D. &c. Author of a Treatise on the Diagnosis and Prognosis of Diseases; Clinical Reports of Select Medical Cases, with Practical Illustrations; and a new System of Pulmonary Pathology. Fourth Edition.—8vo. pp. 97. Bath, 1827.

A Treatise on the Nature and Cure of Rheumatism; with Observations on Rheumatic Neuralgia, and on Spasmodic Neuralgia, or Tic Douloureux. By CHARLES SCUDAMORE, M.D. F.R.S. Honorary Member of Trinity College, Dublin; Physician in Ordinary to his Royal Highness the Prince Leopold of Saxe Coburg, &c. &c.—8vo. pp. 589. London, 1827.

Morborum Definitiones Causæque Continentes, &c. &c. quibus accedit Toxicologia. Auctore RICARDO MADDOCK HAWLEY, M.D. Collegii Regii Medicorum Edinensis Socio, &c.—8vo. pp. 364. Edinburgh, 1827.

A Treatise on Clinical Medicine, being a Compendious and Systematic Introduction to Practice, as contained in the Memoranda of I. R. BISCHOFF, M.D. Imperial Professor of Clinical Medicine, Physician to the General Hospital, and also to the Lying-in Hospital in Prague. From the German, by JOSEPH COPE, M.D.—12mo. pp. 280. London, 1827.

Clinical Observations on the Efficacy of the Hydrochloruret of Lime, as a Remedy in certain Stages of Fever and Dysentery. By ROBERT REID, M.D. Author of a Treatise on Tetanus and Hydrophobia, &c. &c.—8vo. pp. 35. Dublin, 1827.

The Hunterian Oration, delivered before the Royal College of Surgeons in London, on Wednesday, February 14, 1827. By H. LEIGH THOMAS, F.R.S. Member of the Imperial Academy at St. Petersburg, &c.—4to. pp. 28. 1827.

An Oration delivered before the Medical Society of London, on Thursday, March 8, 1827, (being the Fifty-fourth Anniversary,) by WM. KINGDON, Vice-President, &c. &c.—8vo. pp. 16. London, 1827.

Observations on the Necessity of establishing a different System of affording Medical Relief to the Sick Poor, than by the Practice of Contracting with Medical Men, or the Farming of Parishes. By J. F. HULBERT, M.R.C.S. &c. Melksham, Wilts.—8vo. pp. 51. Shrewsbury, 1827.

An Account of the Apparatuses for the Treatment of Rheumatism and Diseases of the Skin, which have been constructed at the Dublin Skin Infirmary; illustrated by many Plates. By Wm. Wallace, m.r.i.a. Surgeon to the Charitable Infirmary of Dublin, and to the Infirmary for the Treatment of Rheumatism and Cutaneous Diseases in that City, &c. &c. Second Edition.—4to. pp. 44. Dublin, 1827.

Some Account of the Science of Botany; being the Substance of an Introductory Lecture to a Course on Botany, delivered in the Theatre of the Royal Institution of Great Britain. By John Frost, f.a.s. f.l.s. &c. &c. (Dedicated by permission to the King.)—4to. pp. 17. London, 1827.

Medical Botany, Nos. IV. and V.; containing Conium Maculatum, Citrus Aurantium, Olea Europœa, Anagallis Arvensis, and Solanum Dulcamara, Digitalis Purpurea, Paris Quadrifolia, Tussilaga.—We always have pleasure in looking over the Numbers of this work: the Plates are really fine specimens of the art; nothing can exceed the accuracy with which most of them are executed,—the Anagallis for example. We think the veins on the leaf of the Paris Quadrifolia too strongly marked. By the by, this rare plant, in addition to the places mentioned, grows also at a spot called the "Corby Pot," near Aberdeen, where we have ourselves gathered it.

METEOROLOGICAL JOURNAL,

From April 20th, to May 20th, 1827.

By Messrs. Harris and Co. Mathematical Instrument Makers, 50, High Holborn.

April	Rain gauge.	Moon.	Thermom.			Barometer.		De Luc's Hygrom.		Winds.		Atmospheric Variations.		
			9 A.M.	MAX.	MIN.	9 A.M.	10P.M.	9 A.M.	10P.M.	9 A.M.	10P.M.	9 *a.m.*	2 *p.m.*	10 *p.m.*
20			44	50	44	29.53	29.47	96	90	ENE	E	Cloudy	Cloudy	Cloudy
21			45	49	41	29.39	29.49	98	98	ENE	ENE	Rain	——	——
22			43	45	37	29.56	29.66	88	82	NE	NNE	Cloudy	——	——
23			42	45	36	29.61	29.53	77	81	N	S	——	——	Fair
24			45	47	34	29.40	29.52	87	80	SSW	SW	——	Sleet	——
25			47	5[illegible]	36	29.63	29.84	74	75	SW v.	SW	Fair	Fair	——
26		●	44	53	38	30.00	30.15	77	70	W	SSW	——	——	——
27			53	57	42	30.18	30.10	68	80	SSE v.	E	——	Fine	——
28			54	64	46	29.98	29.91	85	80	E	E	——	——	——
29			58	71	52	29.90	29.93	81	76	E	E	——	——	——
30			61	74	57	29.98	29.91	79	72	WSW	W	——	——	——
May														
1			63	72	50	29.91	29.91	80	87	W	S v.	——	——	Sl. Rain
2			53	63	53	29.90	29.84	93	96	ESE	ESE	Cloudy	——	Cloudy
3			60	68	53	29.81	29.88	82	76	W	W	Fair	——	Fair
4		☽	58	66	53	29 86	29.67	81	83	WSW	SW	Cloudy	Cloudy	Cloudy
5	.65		58	58	52	29.53	29.37	90	95	SW	SSW	——	Rain	——
6			53	56	44	29.21	29.34	95	92	SSW	NNW	Rain	——	Rain
7			49	55	37	29.55	29.57	72	80	E	ENE	Cloudy	Cloudy	Fair
8			46	50	39	29.72	29.76	78	75	NE	E	——	——	Cloudy
9			45	52	42	29.70	29.67	80	80	ENE	ENE	——	——	——
10			53	56	43	29.65	29.64	76	78	ENE	ESE	——	——	Fair
11		○	52	59	42	29.66	29.83	78	81	ENE	E	Fair	Fair	Cloudy
12			50	57	40	29.96	29.97	75	81	ENE	ENE	——	——	——
13				58	45	29.84	29.75	79	77	NE	NNE	——	——	——
14	.10		54	54	46	29.70	29.66	82	91	NE	NW	——	Cloudy	Rain
15			50	57	46	29.64	29.61	88	85	WSW	SE	Cloudy	Fair	Cloudy
16	.17		60	64	48	29.44	29.31	82	92	E	SE	Fair	Cloudy	Rain
17	.35		58	66	53	29.45	29.49	78	92	SSE	E	——	Rain	——
18		☾	58	66	55	29.52	29.67	87	78	SW	W	——	Fair	Fair
19			65	67	55	29.80	29.90	75	71	NW	W	——	Fine	——

NOTICES.

Communications have been received from* Dr. Ridgway, Mr. D. Fox, Mr. Frost, Mr. P. Blackett, Mr. C. Williams, Mr. Walsh, Mr. G. Bennett, *and from a Correspondent in Alcester, whose name we cannot decipher.

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